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SIXTEENTH ANNUAL REPORT

—OF THE—

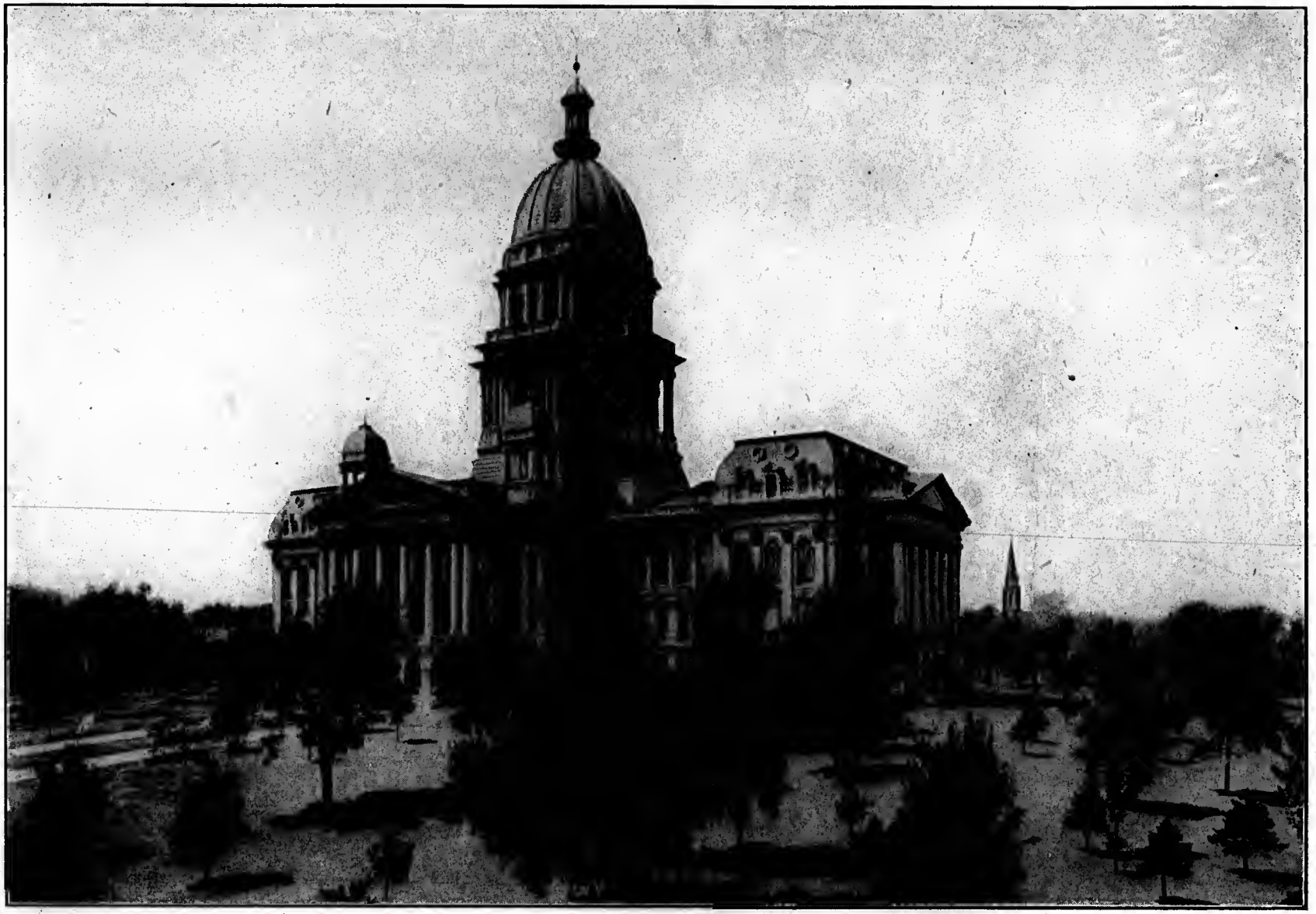
ILLINOIS

State Bee-Keepers' Association

Organized February 26, 1891, at
Springfield, Illinois

COMPILED BY
JAMES A. STONE, SECRETARY,
R. R. 4, Springfield, Ill.

SPRINGFIELD, ILL.:
Illinois State Register Print.
1917



ILLINOIS STATE CAPITOL BUILDING AT SPRNGFIELD.

31 Jan. 1917 A.B.C.

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Letter of Transmittal.

OFFICE OF THE SECRETARY,
R. R. 4, SPRINGFIELD, ILL., March 1, 1917.

To His Excellency Frank O. Lowden, Governor of the State of Illinois:

SIR: I have the honor to transmit herewith the Sixteenth Annual Report of the Illinois State Bee-Keepers' Association.

Respectfully submitted,

JAMES A. STONE, *Secretary.*

414449

31 Jan. 19

FATHER LANGSTROTH,
Inventor of the Movable Frame Hive.

OFFICERS

—OF THE—

Illinois State Bee-Keepers' Association

FOR 1917

EMIL J. BAXTER, - - - - - - - - President
Nauvoo, Ill.

A. L. KILDOW, - - - - - - - - - Putnam
State Foul Brood Inspector.

VICE-PRESIDENTS.

1st DR. A. C. BAXTER, - - - - - - Springfield
2d W. H. WILLIAMS, - - - - - - - Pekin
3d AARON COPPIN, - - - - - - - Wenona
4th A. O. HEINZEL, - - - - - - R. 3, Lincoln
5th G. M. WITHROW, - - - - - - Mechanicsburg
JAMES A. STONE, - - - - - - - Secretary
CHAS. BECKER, - - - - - - - Treasurer
Pleasant Plains.

List of members will appear in back of Report. Also Statistical Report.

Formation of the Illinois State Bee-Keepers' Association.

Springfield, Ill., Feb. 26, 1891.

The Capitol Bee-Keepers' Association was called to order by President P. J. England.

Previous notice having been given that an effort would be made to form a State Association, and there being present bee-keepers from different parts of the State, by motion, a recess was taken in order to form such an Association.

P. J. England was chosen temporary chairman and C. E. Yocum temporary secretary. On motion, the Chair appointed Thos. G. Newman, C. P. Dadant and Hon. J. M. Hambaugh a committee on constitution.

Col. Chas. F. Mills addressed the meeting on the needs of a State Association, and stated that it was his opinion that the bee-keepers should have a liberal appropriation for a State Apiarian Exhibit at the World's Columbian Exposition.

A motion to adjourn till 1:30 p. m. prevailed.

AFTERNOON SESSION.

The Committee on Constitution reported a form for same, which, on motion, was read by the Secretary, by sections serially.

Geo. F. Robbins moved to substitute the word "shall" for "may" in the last clause of Section 1, Article III. This led to a very animated discussion, and the motion was lost.

J. A. Stone moved to amend the above-named section by striking out the word "ladies" and all that followed of the same section, which motion led to further discussion, and motion finally prevailed.

Section 2, Article II., relating to a quorum, was, on motion, entirely stricken out.

Mr. Robbins moved to amend Article V. by adding the words "Thirty days' notice having been given to each member." Prevailed.

Thos. G. Newman moved to adopt the Constitution, so amended, as a whole. Which motion prevailed.

See Constitution.

J. A. Stone moved that the Chair appoint a nominating committee of three on permanent organization. Prevailed.

Chair appointed as such committee, Col. Chas. F. Mills, Hon. J. M. Hambaugh, and C. P. Dadant.

Committee retired and in a few minutes returned, submitting the following named persons as candidates for their respective offices:

For President—P. J. England, Fancy Prairie.

For Vice Presidents—Mrs. L. Harrison, Peoria; C. P. Dadant, Hamilton; W. T. F. Petty, Pittsfield; Hon. J. M. Hambaugh, Spring; Dr. C. C. Miller, Marengo.

Secretary—Jas. A. Stone, Bradfordton.

Treasurer—A. N. Draper, Upper Alton.

Mr. Black moved the adoption of the report of the committee on nominations. The motion prevailed, and the officers as named by the committee were declared elected for the ensuing year.

Hon. J. M. Hambaugh moved that Mr. Thos. G. Newman, editor American Bee Journal, of Chicago, be made the first honorary member of the Association. Prevailed.

At this point Col. Chas. F. Mills said: "Mr. Chairman, I want to be the first one to pay my dollar for membership," at the same time suiting his action to his words, and others followed his example, as follows:

CHARTER MEMBERS.

Col. Chas. F. Mills, Springfield.
Hon. J. M. Hambaugh, Spring.
Hon. J. S. Lyman, Farmingdale.
C. P. Dadant, Hamilton.
Chas. Dadant, Hamilton.
A. N. Draper, Upper Alton.
S. N. Black, Clayton.
Aaron Coppin, Wenona.
Geo. F. Robbins, Mechanicsburg.
J. W. Yocum, Williamsville.
Thos. S. Wallace, Clayton.
A. J. England, Fancy Prairie.
P. J. England, Fancy Prairie.
C. E. Yocom, Sherman.
Jas. A. Stone, Bradfordton.

FIRST HONORARY MEMBER.

Thos. G. Newman, editor American Bee Journal, Chicago.

State of Illinois—Department of State

ISAAC N. PEARSON, Secretary of State.

To all to whom these Presents shall come—GREETING:

Whereas, A certificate duly signed and acknowledged having been filed in the office of the Secretary of State on the 27th day of February, A. D. 1891, for the organization of the Illinois State Bee-keepers' Association, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereunto attached.

Now, Therefore, I, Isaac N. Pearson, Secretary of State, of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said, The Illinois State Bee-Keepers' Association, is a legally organized corporation under the laws of the State.

In Testimony Whereof, I hereunto set my hand and cause to be affixed the great seal of State.

Done at the City of Springfield, this 27th day of February, in the [Seal] year of our Lord one thousand eight hundred and ninety one, and the Independence of the United States the one hundred and fifteenth.

I. N. PEARSON,
Secretary of State.

STATE OF ILLINOIS, } ss.
County of Sangamon. }

To Isaac N. Pearson, Secretary of State:

We, the undersigned, Perry J. England, Jas. A. Stone and Albert N. Draper, citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and for the purposes of such organizations, we hereby state as follows, to-wit:

1. The name of such corporation is, The Illinois State Bee-Keepers' Association.

2. The object for which it is formed is, to promote the general interests of

3. The management of the aforethe pursuit of bee-culture.
said Association shall be vested in a board of three Directors, who are to be elected annually.

4. The following persons are hereby selected as the Directors, to control and manage said corporation for the first year of its corporate existence, viz.: Perry J. England, Jas. A. Stone, and Albert N. Draper.

5. The location is in Springfield, in the County of Sangamon, State of Illinois. (Signed.)

Perry J. England,
Jas. A. Stone,
Albert N. Draper.

STATE OF ILLINOIS, } ss.
Sangamon County. }

I, S. Mendenhall, a notary public in and for the County and State aforesaid, do hereby certify that on this 26th day of February, A. D. 1891, personally appeared before me, Perry J. England, James A. Stone and Albert N. Draper, to me personally known to be the same persons who executed the foregoing certificate, and severally acknowledged that they had executed the same for the purposes therein set forth.

In witness whereof, I have hereunto set my hand and seal the day and year above written.

S. Mendenhall,
[Seal] Notary Public.

CONSTITUTION AND BY-LAWS

—OF THE—

Illinois State Bee-Keepers' Association

CONSTITUTION

Adopted Feb. 26, 1891.

ARTICLE I.—Name.

This organization shall be known as The Illinois State Bee-Keepers' Association, and its principal place of business shall be at Springfield, Ill.

ARTICLE II.—Object.

Its object shall be to promote the general interests of the pursuit of bee-culture.

ARTICLE III.—Membership.

Section 1. Any person interested in Apiculture may become a member upon the payment to the Secretary of an annual fee of one dollar ($1.00). (Amendment adopted at annual meeting, November, 1905): And any affiliating Association, as a body, may become members on the payment of an aggregate fee of fifty cents (50c) per member, as amended Nov., 1910.

Sec. 2. Any persons may become honorary members by receiving a majority vote at any regular meeting.

ARTICLE IV.—Officers.

Section 1. The officers of this Association shall be, President, Vice-President, Secretary and Treasurer. Their terms of office shall be for one year, or until their successors are elected and qualified.

Sec. 2. The President, Secretary and Treasurer shall constitute the Executive Committee.

Sec. 3. Vacancies in office — by death, resignation and otherwise— shall be filled by the Executive Committee until the next annual meeting.

ARTICLE V.—Amendments.

This Constitution shall be amended at any annual meeting by a two-thirds vote of all the members present— thirty days' notice having been given to each member of the Association.

BY-LAWS

ARTICLE I.

The officers of the Association shall be elected by ballot and by a majority vote.

ARTICLE II.

It shall be the duty of the President to call and preserve order at all meetings of this Association; to call for all reports of officers and committees; to put to vote all motions regularly seconded; to count the vote at all elections, and declare the results; to decide upon all questions of order, and to deliver an address at each annual meeting.

ARTICLE III.

The Vice-Presidents shall be numbered, respectively, First, Second, Third, Fourth and Fifth, and it shall be

the duty of one of them, in his respective order, to preside in the absence of the President.

ARTICLE IV.

Section 1. It shall be the duty of the Secretary to report all proceedings of the Association, and to record the same, when approved, in the Secretary's book; to conduct all correspondence of the Association, and to file and preserve all papers belonging to the same; to receive the annual dues and pay them over to the Treasurer, taking his receipt for the same; to take and record the name and address of every member of the Association; to cause the Constitution and By-Laws to be printed in appropriate form, and in such quantities as may be directed by the Executive Committee from time to time, and see that each member is provided with a copy thereof; to make out and publish annually, as far as practicable, statistical table showing the number of colonies owned in the spring and fall, and the amount of honey and wax produced by each member, together with such other information as may be deemed important, or be directed by the Executive Committee; and to give notice of all meetings of the Association in the leading papers of the State, and in the bee journals at least four weeks prior to the time of such meeting.

Sec. 2. The Secretary shall be allowed a reasonable compensation for his services, and to appoint an assistant Secretary if deemed necessary.

ARTICLE V.

It shall be the duty of the Treasurer to take charge of all funds of the Association, and to pay them out upon the order of the Executive Committee, taking a receipt for the same; and to render a report of all receipts and expenditures at each annual meeting.

ARTICLE VI.

It shall be the duty of the Executive Committee to select subjects for discussion and appoint members to deliver addresses or read essays, and to transact all interim business.

ARTICLE VII.

The meeting of the Association shall be, as far as practicable, governed by the following order of business:

Call to order.
Reading minutes of last meeting.
President's address.
Secretary's report.
Treasurer's report.
Reports of committees.
Unfinished business.
Reception of members and collection.
Miscellaneous business.
Election and installation of officers.
Discussion.
Adjournment.

ARTICLE VIII.

These By-Laws may be amended by a two-thirds vote of all the members present at any annual meeting.

C. E. Yocom,
Aaron Coppin,
Geo. F. Robbins

Following is a copy of the law passed by the Illinois Legislature May 19th, and signed by the Governor June 7th, 1911, to take effect July 1st, 1911:

State Foul Brood Law

State Inspector of Apiaries

Preamble.
§ 1. State Inspector of Apiaries—appointment—term—assistants—per diem.
§ 2. Foul Brood, Etc.—what declared nuisances—inspection—notice to owner or occupant—treatment—abatement of nuisance—appeal.
§ 3. Annual Report.
§ 4. Penalties.

HOUSE BILL No. 670.

(Approved June 7, 1911.)

An Act to prevent the introduction and spread in Illinois of foul brood among bees, providing for the appointment of a State Inspector of Apiaries and prescribing his powers and duties.

Whereas, the disease known as foul brood exists to a very considerable extent in various portions of this State, which, if left to itself, will soon exterminate the honey-bees; and

Whereas, the work done by an individual bee-keepeer or by a State inspector is useless so long as the official is not given authority to inspect and, if need be, to destroy the disease when found; and

Whereas, there is a great loss to the bee-keepers and fruit growers of the State each year by the devastating ravages of foul brood;

Section 1. **Be it enacted by the People of the State of Illinois, represented in the General Assembly:** That the Governor shall appoint a State inspector of Apiaries, who shall hold his office for the term of two years, and until his successor is appointed and qualified, and who may appoint one or more assistants, as needed, to carry on the inspection under his supervision. The Inspector of Apiaries shall receive for each day actually and necessarily spent in the performance of his duties the sum of Four Dollars to be paid upon bills of particulars certified to as correct by the said State Inspector of Apiaries, and approved by the Governor.

Sec. 2. It shall be the duty of every person maintaining or keeping any colony or colonies of bees to keep the same free from the disease known as foul brood and from every contagious and infectious disease among bees. All bee-hives, bee-fixtures or appurtenances where foul brood or other contagious or infectious diseases among bees exists, are hereby declared to be nuisances to be abated as hereinafter prescribed. If the inspector of apiaries shall have reason to believe that any apiary is infected by foul brood or other contagious disease, he shall have power to inspect, or cause to be inspected, from time to time, such apiary, and for the purpose of such inspection he, or his assistants, are authorized during reasonable business hours to enter into or upon any farm or premises, or other building or place used for the purpose of propagating or nurturing bees. If said inspector of apiaries, or his assistants, shall find by inspection that any person, firm or corporation is maintaining a nuisance as described in this section, he shall notify in writing the owner or occupant of the

premises containing the nuisance so disclosed of the fact that such nuisance exists. He shall include in such notice a statement of the conditions constituting such nuisance, and order that the same be abated within a specified time and a direction, written or printed, pointing out the methods which shall be taken to abate the same. Such notice and order may be served personally or by depositing the same in the post office properly stamped, addressed to the owner or occupant of the land or premises upon which such nuisance exists, and the direction for treatment may consist of a printed circular, bulletin or report of the Inspector of Apiaries, or an extract from same.

If the person so notified shall refuse or fail to abate said nuisance in the manner and in the time prescribed in said notice, the Inspector of Apiaries may cause such nuisance to be abated, and he shall certify to the owner or person in charge of the premises the cost of the abatement and if not paid to him within sixty days thereafter the same may be recovered, together with the costs of action, before any court in the State having competent jurisdiction.

In case notice and order served as aforesaid shall direct that any bees, hives, bee-fixtures or appurtenances shall be destroyed and the owner of such bees, hives, bee-fixtures or appurtenances shall consider himself aggrieved by said order, he shall have the privilege of appealing within three days of the receipt of the notice to the county court of the county in which such property is situated. The appeal shall be made in like manner as appeals are taken to the county court from judgments of justices of the peace. Written notice of said appeal served by mail upon the Inspector of Apiaries shall operate to stay all proceedings until the decision of the county court, which may, after investigating the matter, reverse, modify or affirm the order of the Inspector of Apiaries. Such decision shall then become the order of the Inspector of Apiaries, who shall serve the same as hereinbefore set forth and shall fix a time within which such decision must be carried out.

Sec. 3. The Inspector of Apiaries shall, on or before the second Monday in December of each calendar year, make a report to the Governor and also to the Illinois State Bee Keepers' Association, stating the number of apiaries visited, the number of those diseased and treated, the number of colonies of bees destroyed and the expense incurred in the performance of his duties.

Sec. 4. Any owner of a diseased apiary or appliances taken therefrom, who shall sell, barter or give away any such apiary, appliance, queens or bees from such apiary, expose other bees to the danger of contracting such disease, or refuse to allow the Inspector of Apiaries to inspect such apiary, or appliances, shall be fined not less than $50.00 nor more than $100.00.

Approved June 7, 1911.

(Bill passed in the 50th General Assembly.)

Bee-Keepers' Association.

THE ORIGINAL BILL.

§ 1. Appropriates $1,000 per annum—proviso.
§ 2. How drawn.
§ 3. Annual Repoort.

An Act making an appropriation for the Illinois State Bee-Keepers' Association.

Whereas, The members of the Illinois State Bee-Keepers' Association have for years given much time and labor without compensation in the endeavor to promote the interests of the bee-keepers of the State; and,

Whereas, The importance of the industry to the farmers and fruit-growers of the State warrants the expenditure of a reasonable sum for the holding of annual meetings, the publication of reports and papers containing practical information concerning bee-keeping, therefore, to sustain the same and enable this organization to defray the expenses of annual meetings, publishing reports, suppressing foul brood among bees in the State, and promote the industry in Illinois;

Section 1. Be it enacted by the People of the State of Illinois represented in the General Assembly: That there be and is hereby appropriated for the use of the Illinois State Bee-Keepers' Association the sum of one thousand dollars ($1,000) per annum for the years 1915 and 1916. For the purpose of advancing the growth and developing the interests of the bee-keepers of Illinois, said sum to be expended under the direction of the Illinois State Bee-Keepers' Association for the purpose of paying the expenses of holding annual meetings, publishing the proceedings of said metings, suppressing foul brood among bees in Illinois, etc.

Provided, however, That no officer or officers of the Illinois State Bee-Keepers' Association shall be entitled to receive any money compensation whatever for any services rendered for the same, out of this fund.

Sec. 2. That on the order of the President, countersigned by the Secretary of the Illinois State Bee-Keepers' Association, and approved by the Governor, the Auditor of Public Accounts shall draw his warrant on the Treasurer of the State of Illinois in favor of the treasurer of the Illinois State Bee-Keepers' Association for the sum herein appropriated.

Sec. 3. It shall be the duty of the treasurer of the Illinois State Bee-Keepers' Association to pay out of said appropriation, on itemized and receipted vouchers, such sums as may be authorized by vote of said organization on the order of the president, countersigned by the secretary, and make annual report to the Governor of all such expenditures, as provided by law.

Itemized in the Omnibus Bill as follows:

For Shorthand Reporting	$ 200.00
For Postage and Stationery	100.00
For Printing	500.00
Expense of Meetings	200.00
Total Amount of the Appropriation	$1,000.00

Code of Rules and Standards for Grading Apiarian Exhibits at Fair as Adopted by Illinois State Bee-Keepers' Association.

COMB HONEY.

Rule 1. Comb honey shall be marked on a scale of 100, as follows:

Quantity	40
Quality	40
Style of display	20

Rule 2. Points of quality should be:

Variety	5
Clearness of capping	10
Completeness of capping	5
Completeness of filling	5
Straightness of comb	5
Uniformity	5
Style of section	5

Remarks: 1. By variety is meant different kinds, with regard to the sources from which the honey is gathered, which adds much interest to an exhibit.

2. By clearness of capping is meant freedom from travel stain and a water soaked appearance. This point is marked a little high, because it is a most important one. There is no better test of the quality of comb honey than the appearance of the cappings. If honey is taken off at the proper time, and cared for as it should be. so as to preserve its original clear color, body and flavor will take care of themselves, for excellence in the last two points always accompanies excellence in the first. Clover and basswood honey shoud be white; heartsease, a dull white tinged with yellow; and Spanish needle, a bright yellow.

3. By uniformity is meant closeness of resemblance in the sections composing the exhibit.

4. By style is meant neatness of the sections, freedom from propolis, etc.

5. Honey so arranged as to show every section should score the highest in style of display, and everything that may add to the tastiness and attractivness of an exhibit should be considered.

EXTRACTED HONEY.

Rule 1. Extracted honey should be marked on a scale of 100, as follows:

Quantity	40
Quality	45
Style of display	15

Rule 2. The points of quality should be:

Variety	10
Clearness of color	5
Body	5
Flavor	5
Style of package	10
Variety of package	5
Finish	5

Remarks: 1. Light clover honey pouring out of a vessel is a very light straw color; Spanish needle, a golden hue, and dark clover honey, a dull amber.

2. Style of package is rated a little high, not only because in that consists the principal beauty of an exhibit of extracted honey, but also because it involves the best package for marketing. We want to show honey in the best shape for the retail trade, and that, in this case, means the most attractive style for exhibition. Glass packages should be given the preference over tin; flint glass over green, and smaller vessels over larger, provided the latter run over one or two pounds.

3. By variety of package is meant chiefly different sizes; but small pails for retailing, and, in addition, cans or kegs (not too large) for wholesaling, may be considered. In the former case, pails painted in assorted colors, and lettered "Pure Honey," should be given the preference.

4. By finish is meant capping, labeling, etc.

5. Less depends upon the manner of arranging an exhibit of extracted than of comb honey, and for that reason, as well as to give a higher number of points to style of package, a smaller scale is allowed for style of display.

SAMPLES OF COMB AND EXTRACTED HONEY.

Rule 1. Single cases of comb honey, entered as such for separate premiums, should be judged by substantially the same rules as those given for a display of comb honey, and samples of extracted, by those governing displays of extracted honey.

Rule 2. Samples of comb or extracted honey, as above, may be considered as part of the general display in their respective departments.

GRANULATED HONEY.

Rule 1. Candied or granulated honey should be judged by the rules for extracted honey, except as below.

Rule 2. The points of quality should be:

Variety	10
Fineness of grain	5
Color	5
Flavor	5
Style of package	10
Variety of package	5
Finish	5

Rule 3. An exhibit of granulated honey may be entered or considered as part of a display of extracted honey.

NUCLEI OF BEES.

Rule. Bees in observation hives should be maked on a scale of 100, as follows:

Color and markings	30
Size of bees	30
Brood	10
Queen	10
Quietness	5
Style of comb	5
Style of hive	10

Remarks: 1. Bees should be exhibited only in the form of single frame nuclei, in hives or cages with glass sides.

2. Italian bees should show three or more bands, ranging from leather color to golden or light yellow.

3. The markings of other races should be those claimed for those races in their purity.

4. A nucleus from which the queen is omitted should score zero on that point.

5. The largest quantity of brood in all stages or nearest to that should score the highest in that respect.

6. The straightest, smoothest and most complete comb, with the most honey consistent with the most brood, should score the highest in that respect.

7. That hive which is neatest and best made and shows the bees, etc., to the best advantage should score the highest.

QUEEN BEES.

Rule. Queen bees in cages should be marked on a scale of 100, as follows:

Quantity	40
Quality and variety	40
Style of caging and display	20

Remarks: 1. The best in quality consistent with variety should score the highest. A preponderence of Italian queens should overweigh a preponderance of black ones, or, perhaps, of any other race or strain; but sample queens of any or all varieties should be duly considered. Under the head of quality should also be considered the attendant bees. There should be about a dozen with each queen.

2. Neatness and finish of cages should receive due consideration, but the principal points in style are to make and arrange the cages so as to show the inmates to the best advantage.

BEESWAX.

Rule. Beeswax should be marked on a scale of 100, as follows:

Quantity	40
Quality	40
Style of display	20

Remarks: 1. Pale, clear, yellow specimens should score the highest, and the darker grades should come next in order.

2. By style is meant chiefly the forms in which the wax is molded and put up for exhibition. Thin cakes or small pieces are more desirable in the retail trade than larger ones. Some attention may be given to novelty and variety.

Foul Brood and Other Diseases of Bees.

Foul brood—bacillus alvei—is a fatal and contagious disease among bees, dreaded most of all by bee-keepers. The germs of disease are either given to the young larval bee in its food when it hatches from the egg of the queen-bee, or it may be contagion from a diseased colony, or if the queen deposits eggs, or the worker-bees store honey or pollen in such combs. If in any one of the above cases, the disease will soon appear, and the germs increase with great rapidity, going from one little cell to another, colony to colony of bees, and then to all the neighboring apiaries, thus soon leaving whole apiaries with only diseased combs to inoculate others. The Island of Syria in three years lost all of its great apiaries from foul brood. Dzierzon, in 1868, lost his entire apiary of 500 colonies. Cowan, the editor of the British Bee Journal, recently wrote: "The only visible hindrance to the rapid expansion of the bee industry is the prevalence of foul brood, which is so rapidly spreading over the country as to make bee-keeping a hazardous occupation."

Canada's foul brood inspector, in 1890 to 1892, reported 2,395 cases, and in a later report for 1893 to 1898, that 40 per cent of the colonies inspected were diseased. Cuba is one of the greatest honey-producing countries, and was lately reported to me by a Wisconsin bee-keeper who has been there, and will soon return to Wisconsin: "So plentiful is foul brood in Cuba that I have known whole apiaries to dwindle out of existence from its ravages, and hundreds more are on the same road to sure and certain death. I, myself, took, in 90 days in Cuba, 24,000 pounds of fine honey from 100 colonies, but where is that apiary and my other 150-colony apiary? Dead from foul brood." Cuba, in 1901, exported 4,795,600 pounds of honey, and 1,022,897 pounds of beeswax.

Cuba at present has laws to suppress foul brood, and her inspector is doing all possible to stamp the same from the island.

Even in Wisconsin I know of several quite large piles of empty hives, where also many other apiaries where said disease had gotten a strong foothold.

By the kindness of the Wisconsin bee-keepers, and, in most cases, by their willing assistance, I have, during the last five years, gotten several counties free of the disease, and at the present writing, March 12, 1902, have what there is in Wisconsin under control and quarantined. This dreadful disease is often imported into our State from other States and countries, so we may expect some new cases to develop until all the States shall enact such laws as will prevent further spread of the same. Arizona, New York (1899), California (1891), Nebraska (1895), Utah (1892), Colorado (1897), have county inspectors, and Wisconsin (1897), and Michigan (1901), have State inspectors. The present Wisconsin law, after five years of testing and rapid decrease of the disease, is considered the best, and many other States are now making efforts to secure a like law.

There are several experimental apiaries in Canada, under control of the Ontario Agricultural College; also a few in the United States, especially in Colorado, that have done great work for the bee-keeping industry, and their various published bulletins on the same are very valuable. The Wisconsin State Bee-Keepers' Association has asked that an experimental apiary might be had on the Wisconsin Experimental Farm, but at present there are so many departments asking for aid that I fear it may be some time before bee-culture will be taken up.

Causes of Foul Brood.

1. Many writers claim foul brood originates from chilled or dead brood. Dr. Howard, of Texas, one of the best

practical modern scientific experimenters, a man of authority, has proven beyond a doubt that chilled or common dead brood does not produce foul brood. I have, in the last five years, also proven his statement to be true in Wisconsin, but I do believe such conditions of dead brood are the most favorable places for lodgment and rapid growth of disease. Also, I do not believe foul brood germs are floating in the air, for, if they were, why would not every brood-comb cell of an infected hive become diseased? I believe that this disease spreads only as the adult bees come in contact with it, which is often through robber-bees. Brood-combs should not be removed from any colony on cold or windy days, nor should they be left for a moment in the direct rays of sunshine on hot days.

2. The foul brood may be caused by the need of proper food and temperature. Generally this disease does not appear to be serious during a honey-flow, but at the close of the honey season, or at time of scarcity, it is quite serious, and as the bees at such times will rob anywhere they can find stores, whether from healthy or diseased combs, it is the duty of every bee-keeper to keep everything carefully protected. Hive-entrances contracted, no old combs or any article with a drop of honey in where the bees can get to it. While honey is coming in from the various flowers, quite a portion is used direct as food for the larval bee, and with such no disease would be fed to the bees. Such fed bees, even in a diseased hive, will hatch, as is often the case. I never knew a case where a bee hatched from a brood cell that had ever had foul brood in. If the germs of disease are there in the dried scale attached to the lower side walls, bees will store honey therein; the queen will deposit eggs, or the cell may be filled with pollen, or beebread, as some call it. Said honey, or pollen, when it comes in contact with those germs of disease, or the food given to the young bee, if in the proper temperature, said germs of disease will grow and develop rapidly.

Causes of Contagion.

I fully believe that if the history of foul brood in Wisconsin were known, nearly every case could be traced to contagion from diseased combs, honey, or from home diseased queen-breeders' cages. There are some instances where I have traced the history of contagion in Wisconsin:

1. Diseased apiaries, also single colonies, sold either at auction or private sale. Several law suits have resulted in the settlement of some of the cases.

2. Brood-combs and various implements from diseased hives, used by other bee-keepers, and borrowed articles.

3. All the bees in an apiary dead from foul brood, and the hives having an abundance of honey in the brood-combs, said combs placed out by the side of hives, so that neighbor's bees might get the honey. From those combs I lined robber bees to seven other apiaries, and each time became diseased and were treated.

4. Robber bees working on empty honey packages in the back yards of grocery stores and baking factories. Said honey came from diseased apiaries, some located in far distant states, even Cuba.

5. Loaning of hives, combs, extractors, and even empty honey-packages.

6. Buying honey from strangers, or not knowing where it was produced, and feeding it to bees without boiling the honey.

7. Too common a practice of using old brood-combs from some apiary where the owner's bees have died from "bad luck," as he calls it.

8. Queen-bee—by buying queen bees from strangers and introducing them in the cages they came in. I have traced several new outbreaks of the disease to the hives where such queens were introduced, and the queens came from distant states. To be safe, on arrival of queen, put her carefully alone in a new and clean cage with good food in it. Keep her in there, warm and comfortable, for a few hours before introducing. The shipping cage and every bee that came with the queen should be put in the stove and burned. I do not think there is any danger from the queen so treated, even from diseased hives, but I do know of many cases where disease soon appear in the hives, where the shipping cage and bees were put in with the colony. The great danger is in the food in said cage being made from diseased honey. I was called to attend a State bee-keepers' meeting

in another State, and I asked if any there had had experience with foul brood. There was a goodly number of raised hands. Then I asked: "Do any of you think you got the disease by buying queen-bees?" Again several hands were raised. Even bee-keepers there had traced the disease in their apiaries to the buying of queens, and all from the same breeder. If you get queens from abroad, I hope you will do with them as I have described above. Better be on the safe side.

Experiments.

1. A prominent Wisconsin bee-keeper some years ago had foul brood among his bees so bad that he lost 200 colonies before the disease was checked. Having a honey-extractor and comb-foundation machine, he first boiled the hives in a large sorghum pan, then in a kettle all combs were melted after the honey was extracted; the honye was boiled and also the extractor and implements used. The bees were returned to their hives on comb-foundation he made from the wax made from the melted combs, then fed the boiled honey. Several years have passed, and there has been no sign of disease in his apiary since.

2. Foul-brood germs are not always killed when exposed to a temperature of 212 deg. F. (boiling point) for 45 minutes. uBt in every case where the combs are boiled in boiling water, and same were well stirred while boiling, no germs were alive.

3. Foul brood in brood-combs is not destroyed when exposed to the temperature of Wisconsin winters of 20 deg. below zero, and in one case I developed foul brood from combs that had been exposed to 28 deg. below zero.

4. Honey, if stored in diseased combs, acts as a preserving medium, and in such cases the germs of disease will remain so long as the comb is undisturbed. Four years at least.

5. Honey or beeswax, or the refuse from a solar or sunheat extractor, is not heated enough to kill foul-brood germs. Several cases of contagion where robber bees worked on solar extractor refuse or honey.

6. Comb-foundation made by supply manufacturers is free from live germs of disease and perfectly safe to use. To prove this experiment beyond a doubt, I took a quantity of badly diseased brood-combs from several apiaries and render each batch of combs into wax myself on the farm where found. Then on my own foundation mill I made some brood-foundation. I also took quite a quantity more of said wax, went to two wholesale comb-foundation manufacturers, and both parties willingly made my experimental wax into comb-foundation, just the same as they do every batch of wax, I then divided the various makes of foundation, and selected 20 of the best bee-yards in Wisconsin, where no disease has ever been known; had the same placed in 62 of their best colonies, and in every case no signs of disease have appeared. Those same colonies tontinue to be the best in the various apiaries.

Symptoms of Foul Brood.

1. The infected colony is not liable to be as industrious. Hive entrance with few guard bees to protect their home. Sometimes fine dirt or little bits of old comb and dead bees in and around the hive-entrance, and often robber bees seeking entrance.

2. Upon opening the hive, the brood in the combs is irregular, badly scattered, with many empty cells which need inspection.

3. The cappings over healthy brood are oval, smooth, and of a healthy color peculiar to honey-bee brood, but if diseased, the cappings are sunken, a little darker in color, and have ragged pin holes. The dead larval bee is o fa light color, and, as it is termed, ropy, so that if a toothpick is inserted and slowly withdrawn, this dead larva will draw out much like spittle or glue.

4. In this ropy stage there is more or less odor peculiar to the disease; it smells something like an old. stale gluepot. A colony may be quite badly affected and not omit much odor, only upon opening of the hive or close examination of the brood. I have treated a few cases where the foul brood odor was plainly noticed several rods from the apiary.

5. Dried Scales.—If the disease has reached the advanced stages, all the above described conditions will be easily seen and the dried scales as well. This foul matter is so tenacious that the bees cannot remove it, so it dries down on the lower side-wall of the cell, midway from the bottom to front end of the cell, seldom on the bottom

of the cell. According to its stage of development, there will be either the shapeless mass of dark brown matter, on the lower side of the cell, often with a wrinkled skin covering, as if a fine thread had been inserted in the skin legthwise and drawn enough to form rib-like streaks on either side. Later on it becomes hardened, nearly black in color, and in time dries down to be as thin as the side walls of the cell. Often there will be a small dried bunch at the front end of the cell, not larger than a part of a common pin head. To see it plainly, take the comb by the top bar and hold it so that a good light falls into the cell at an angle of 75 degrees from the tip of the comb, while your sight falls upon the cell at an angle of about 45 degrees. The scales, if present, will easily be seen as above described. This stage of disease in combs is easily seen, and is always a sure guide or proof of foul brood. Such combs can never be used safely by the bees, and must be either burned or carefully melted. Be sure not to mistake such marked combs in the spring for those soiled with bee dysentery. The latter have a somewhat similar appearance, but are more or less surface soiled, and will also be spotted or have streaked appearance by the dark brown sticky excrements from the adult bees.

Treatment.

"A bee-keeper who does not discover foul brood, before his nostrils remind him that there is something wrong with his bees, is not the proper person to treat the case." Dr. Howard, in his valuable book on foul brood, states: "I regard the use of all drugs in the treatment of foul brood as a useless waste of time and material, wholly ineffectual, inviting ruin and total loss of bees. Any method which has not for its object the entire removal of all infectious material beyond the reach of both bees and brood, will prove detrimental and destructive, and surely encourage the recurrence of the disease." In Wisconsin, I have tried many methods of treatment, and cured some cases with each method; but the one that never fails, if carefully followed, and that commends itself, is the McEvory treatment. Canada's foul brood inspector has cured foul brood by the wholesale—thousands of cases.

McEvoy Treatment.

"In the honey season, when the bees are gathering honey freely, remove the combs in the evening and shake the bees into their own hives; give them frames with comb-foundation starters, and let them build comb for four days. The bees will make the starters into comb during the four days, and store the diseased honey in them, which they took with them from the old comb. Then, in the evening of the fourth day, take out the new combs and give them comb-foundation (full sheets) to work out, and then the cure will be complete. By this method of treatment all the diseased honey is removed from the bees before the full sheets of foundation are worked out. All the old foul-brood combs must be burned or carefully made into wax, after they are removed from the hives, and all the new combs made out of the starters during the four days must be burned or made into wax, on account of the diseased honey that would be stored in them. All the curing or treating of diseased colonies should be done in the evening, so as not to have any robbing done, or cause any of the bees from the diseased colonies to mix and go with the bees of healthy colonies. By doing all the work in the evening, it gives the bees a chance to settle down nicely before morning, and then there is no confusion or trouble. This same method of curing colonies of foul brood can be carried on at any time from May to October, when the bees are not getting any honey, by feeding plenty of sugar syrup in the evenings to take the place of the honey flow. It will start the bees robbing and spread the disease, to work with foul brood colonies in warm days when the bees are not gathering honey, and for that reason all work must be done in the evenings when no bees are flying.

"When the diseased colonies are weak in bees, put the bees, two, three, or four colonies together, so as to get a good sized colony to start the cure with, as it does not pay to spend time fussing with little, weak colonies. When the bees are not gathering honey, any apiary can be cured of foul brood by removing the diseased combs in the evening and giving the bees frames with comb-foundation starters on. Then, also, in the vening feed the bees plenty of sugar syrup, and they will draw out the foundation and

sore the diseased honey which they took with them from the old combs; on the fourth evening remove the new combs made out of the starters, and give the bees full sheets of comb-foundation, and feed plenty of sugar syrup each evening, until every colony is in first class order. Make the syrup out of granulated sugar, putting one pound of water to every pound of sugar, and bring it to a boil. As previously stated, all the old comb must be burned, or made into wax, and so must all new combs made during the four days. No colony is cured of foul brood by the use of any drug.

A. I. Root, of Medina, Ohio, says: "The starvation plan, in connection with burning the combs and frames and building the hives, has worked the best in treating foul brood. It never appeared after each treatment, though it did in some cases where the hives were honey-stained and not boiled, thus comfirming the theory or fact of spores."'

All the difference from the McEvory treatment that I practice is this: I dig a deep pit on level ground near the diseased apiary, and after getting a fire in the pit, such diseased combs, frames, etc., as are to be burned are burned in this pit in the evening, and then the fresh earth from the pit returned to cover all from sight. Often I use some kerosene oil, a little at a time being poured on old broodcombs, or those having much honey in, as they are hard to burn. If diseased combs with honey in are burned on the surface of the soil, there is great danger; the honey, when heated a little, will run like water on the soil, and in the morning the robber bees will be busy taking home the diseased honey that was not heated enough to kill germs of foul brood.

I also cage the queen while the bees are on the five or six strips of foundation. It helps to keep the colony from deserting the hive and going to other colonies.

R. L. Taylor, Michigan University Experimental Apiary, reports: "The plan that the colony be shaken out into another hive after being allowed to build comb for four days, I have proven, in 100 cases, to be unnecessary."

In Wisconsin I, too, have cured several cases by the one transferring, when honey was not coming in very freely, but it is better, and a great saving of time to both bees and owner, to exchange in three or four days, those foundation starters, for full sheets of foundation. Diseased broodcombs and those with honey in, if melted in a sun or solar extractor, the wax, honey or residue is not hot enough to kill germs of foul brood. This I have proven by several experiments. It must be boiled and well stirred while boiling, to be safe.

I do not believe in, or practice, burning any property, such as hives, bees, beeswax or honey, that can be safely treated and saved. Many times it is poor economy to save all, and so many bee-keepers are not so situated as to keep all diseased material from robber bees while taking care of it; the best and oly safe way is to burn the diseased combs and frames.

Utah.

Utah has county inspectors, and from one who has remarkable success I copy the report of his method of treatment:

"Wherever found it should be dealt with earnestly and with dispatch. If the colony is weak, I recommend something to kill the bees, and, in order to do this without letting a bee escape, take a tablespoonful of sulphur and place it in the hive entrance of the hives; if there is any breeze, turn the hive so it will blow in the entrance. Then fire the sulphur and it will soon kill the bees. This should be done early in the morning, before any of the bees are flying, as one bee escaping fro mthe hive might carry the disease to any colony with which it may take up its abode. If the colony is a strong one, I would keep the entrance partly closed, so as to prevent any other bees from getting in. Then as soon as fruit blossoms come out so the bees can obtain honey, I treat them. I procure an empty box of any kind, so it is clean, then find the queen, put her in a screen wire cage, which is easily made. Take a small piece of screen roll it up and tie a string arond either end; cork up one end, then place the queen and a few workers, for company, in the cage, and place in the other end cork. Put same in this box, and shake all the bees out of their hive into this box. This must be done in the evening, when no bees are flying. Keep the queen in this box for 24 to 48 hours,

allowing the bees to fly in and out as they please. Next take a clean hive, with good, healthy combs or foundation, and shake bees into it, letting the queen go, and they will be free from disease. The old combs are melted into wax, bringing same to a good boil. Often washing with boiling water any hives or implements that might contain disease. Whenever strictly followed, this has affected a cure."—C. Wilcox, Emery Co., Utah.

Pickled Brood.

Some seasons pickled brood is quite bad among bees, and in a few cases I have known it to reduce large colonies, even large apiaries, to doubtful hopes, but those same colonies, after I gave them treatment, were in a month free from disease. Sometimes it takes as careful handling as if foul brood. I do not believe it is contagious, for all I have seen 60 colonies in one apiary badly reduced by it. As an experiment, one of my out-apiaries had 50 colonies at one time with pickled brood. I treated them, and all were soon free from dead brood. At the same time I took ten of the worst brood-combs, where at least two-thirds of the brood were dead, and placed these combs in other strong, healthy colonies. They at once cleaned out the dead brood, and reared as nice brook as one could ask for.

Symptoms.

The larval bees (in last of May and through June) show light brown spots; a little later the cappings have small holes in—the cappings are not shrunken or dark colored, as in foul brood. The dead bee will be first swollen, with a black head dried to a hard bunch, and often turned up—Chinaman-shoe-like. The skin of the dead bee is quite tough, and, if punctured, the thin, watery fluid of the body will flow as freely as water, often a little yellow or brownish colored from the dissolved pollen from the abdomen of the bee. It has very little or no smell; does not at any time stick to the walls of the comb; is easily pulled out of the cell; is never ropy or sticky, and, if the colony is properly cared for, the bees will take care of themselves. Plenty of liquid, unsealed honey and pollen near the brood, and hives so protected as to keep the bees and brood comfortable on cold days and nights.

Never put bees on old black brood-combs, or those with dead broods in; better make wax of the combs, and give the bees full sheets of broodcomb foundation.

Treatment.

Keep all colonies strong, with plenty of unsealed honey near the brood, and if hives are properly sheltered, so as to be warm on cold days and nights, there will be little or no pickled brood. If the queen is old, shows signs of weakness by putting several eggs in one brood-cell and nursing several others, so that the brood is patchy, I would kill such a queen, feed the bees a little, and, when queen-cells are started, remove them all and give them a queen and bees, between two of her own brood-combs from a hive where she has lived. I do not think pickled brood is often the fault of the queen, but rather a lack of proper food and heat in the hive. In most cases, a shortage of liquid honey, or moldy pollen, even in hives with plenty of sealed honey in the outer combs. There is a time in spring in Wisconsin, between dandelions and white clover bloom, when there is no honey coming in from flowers, and often cold days and nights, so that the live bees consume the liquid, unsealed honey first, and cluster in a compact body to keep warm; the result often is the larval bee, just changed from the egg to a tender little grub, is either starved, half-fed or chilled, so that it grows slowly, and too often it dies, and then it is we first notice this about the time white clover honey begins to come in. In other parts of the state, where pickled brood appeared, it was from the same cause, and at other dates, which was due to a difference of time of honey bloom.

Wherever I fed daily some honey, or even sugar syrup, and kept the hive warm, all dead brood soon disappeared while in the same apiaries other colonies affected and not so treated, continued for some time, but got rid of it as soon as treated.

Strong colonies of bees in the fall, with a young laying queen, and an abundance of good honey, sealed or capped by the bees, if properly cared for during winter, whether in the cellar or in chaff hives, wintered out of doors in sheltered location, seldom have pickled brood, chilled or other dead brood, or dysentery, and are the colonies that give their owner profit.

Black Brood.

Black brood is another fatal and contagious disease among bees, affecting the old bees as well as the brood. In 1898, 1899 and 1900, it destroyed several apiaries in New York. Last year I found one case of it in Wisconsin, which was quickly disposed of. Dr. Howard made more than a thousand microscopic examinations, and found it to be a distinct form of bacteria. It is most active in sealed brood. The bees affected continue to grow until they reach the pupa stage, then turn black and die. At this stage there is a sour smell. No decomposition from putrefactive germs in pickled brood. In black brood the dark and rotten mass in time breaks down and settles to lower side-walls of the cell; is of a watery, granulated, syrupy fluid, jelly-like; is not ropy or sticky, as in full brood, and has a peculiar smell, resembling sour, rotten apples. Not even a house fly will set a foot upon it.

Treatment.

Best time is during a honey-flow, and the modified McEvoy plan, much as I have treated foul brood, by caging the queen five days, remove the foundation starters and giving full sheets, keeping que n caged five days longer. As great care should be taken of diseased hives, combs, honey, etc., as in foul brood.

Dysentery.

Dysentery among bees in Wisconsin in the spring of the year is often quite serious. Many colonies die with it. Dysentery is the excrements of the old bees; it is of brownish color, quite sticky, and very disagreeable smelling, and is sometimes mistaken for foul brood.

Causes.

1. Bees confined too long in the hives, so that they can no longer withhold their excrements, and are compelled to void the same on the other bees and combs.

2. Poor winter stores, gathered in the fall from honey-dew, cider mills, sorghum mills, rotten fruit; also some kinds of fall flowers.

3. Old and especially moldy pollen or bee-bread.

4. Hives too cold or damp. If moisture from the breath of the bees is not carried out of the hive by some means, such as through a deep cushion of some kind over the bees that will absorb moisture and at the same time retain the heat, or by some means of ventilation, so that all is dry and comfortable. If mold forms on the combs or cellar is so damp as to form mold, there is great danger the bees will have dysentery and die.

Treatment.

1. First of all, have an abundance of combs of sealed clover or basswood honey in brood-frames carefully saved, and see that each colony is wintered on such food. Three or four such combs will winter a fair colony safely, if confined on those combs late in the fall, and the hive contracted to fit the same. This is one of the most important conditions for success in wintering.

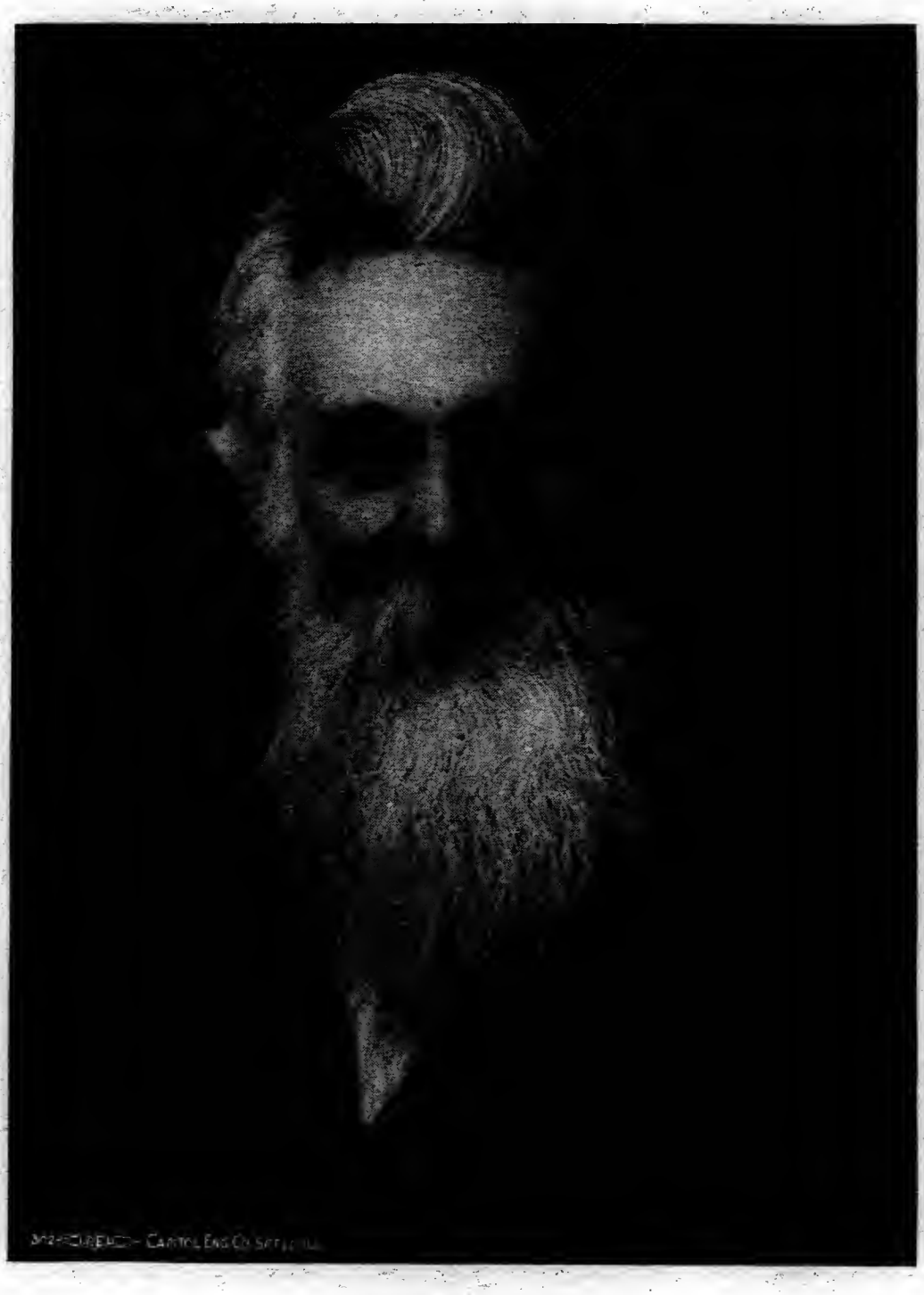
2. If in the fall the bees have gathered this unwholesome honey from the above named sources, it should all be extracted and either exchanged for those honey-combs, or feed the bees good honey or sugar syrup until winter stores are secured. This should be done before cold weather in the fall.

3. Hives contracted and made comfortable, whether in cellar or outdoors.

4. If wintered in chaff hives outdoors, with feed as above directed, and there come one or two warm spells during winter, so that the bees can have a cleansing flight, they will not have dysentery or dead brood, and will be much stronger when clover opens.

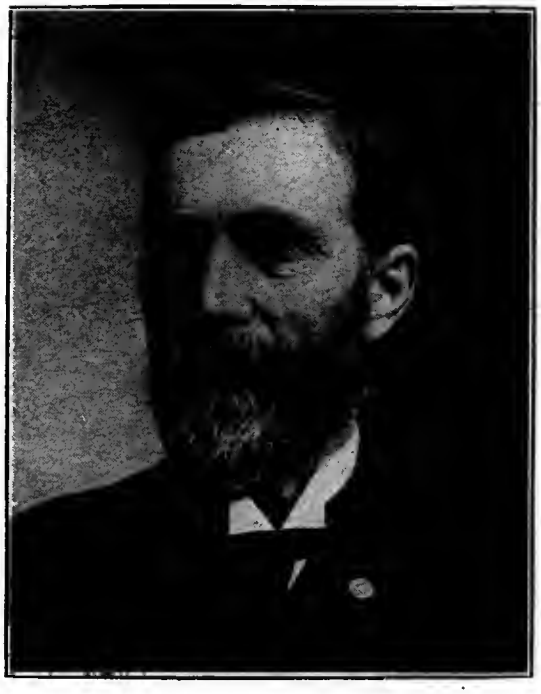
If wintered in the cellar, the bees will not need so much honey, and if the winters are generally long, with doubtful warm spells, the cellar will be best. But to keep the bees from dysentery, so often fatal to cellar-wintered bees, they should have such winter stores as above spoken of, then the cellar kept at a medium temperature, about 32 deg. F., ventilated so the air is fresh, and no mold will form in the cellar. Fresh air-slaked lime on the bottom of the cellar may help, if it is damp or has poor air.

5. Dysentery will not appear if bees are kept on sugar syrup, or best grade white clover or basswood honey, and are in a dry place, either sheltered by cellar or chaff-hive.



E. J. BAXTER, President,

And a Director of the National.



JAMES A. STONE, Secretary.

PROCEEDINGS

—OF THE—

Twenty-Sixth Annual Session

—OF THE—

Illinois State Bee-Keepers' Association

November 15th and 16th, 1916,

IN SENATE CHAMBER.

The 26th Annual Meeting of the Illinois State Bee-Keepers' Association was held in the Senate Chamber at Springfield, Illinois, November 15th and 16th, 1916.

The meeting was called to order by the President, Mr. Emil J. Baxter, at 10 a. m., November 15th.

President Baxter—The first number will be the invocation by Reverend Charles W. Ross, Pastor of the West Side Christian Church.

Prayer by Rev. Charles W. Ross.

Our Heavenly Father, we come before Thee in this hour praying Thy blessing upon us. We come thanking Thee for every good thing that Thou hast brought into our lives. We thank Thee for the temporary blessings of life, for the physical comforts, for those things that Thou hast provided for us that will help us to make the most of our lives here upon earth. Those things that will help us not only in our own lives but will help us in aiding and upbuilding the lives of others. We thank Thee, our Father, that, in the provision of these things that have so large a part in our life, we can in deed and in truth be laborers together with Thee, working hand in hand with Him who is the author and giver of life, who hast blest us time without number in all the days of our sojourn with Thee upon earth, but, our Father, we thank Thee for the spiritual lessons of life which we may learn even in the writing of God that we are able to read, who will, in the phenomena of nature.

We pray Thee, our Father, that Thou wilt bless this Association under whose auspices we are met here this day and hour, and may we recognize the greatness of that character and that life, that not a sparrow falls to the ground but Thou art cognizant of it; that the very hairs of our heads are numbered. May we realize that if Thou dost so clothe the lilies of the field, that are here today and tomorrow are not, that Thou wilt care for us. We thank Thee, our Father, for the lessons which we can learn, not only from this Association but from the busy insect whose husbandry is under consideration in this assemblage, and may we, our Father, try to be industrious; may we be busy in season and out of season, doing the work that Thou hast called us to do. May we recognize, our Father, we shall not be judged according to our ability and not judged alone as to the line of work in which we are engaged if it be that which is right and which may call forth Thy approval, but may we recognize, our Father, that we will be judged as to whether we shall do according to the ability that Thou hast given unto us, whether we shall fill our place and do our work in love and do it well, not that we shall do it better than some one else can do but that we shall do the work that Thou hast called us to do the very best that we ourselves are able. We pray in a special way that Thou wilt bless all this assembly, the officers and members, in their work, in their lives, in their homes. Bless the speakers, our Father, that they shall

bring messages throughout these sessions; bless us all and keep us in Thy favor and in Thy life, and in the end that we may all be assembed around the throne of God, where we will praise Thee world without end, through Jesus Christ our Lord, Amen.

President Baxter—Our next number wil be the address of welcome by Mr. Prather.

Address of Welcome.

Mr. President, Ladies and Gentlemen:

Your secretary, Mr. Stone, invited me to address you on this occasion, and I have been trying to reach a decision in my own mind, since that time, why he should have called on me for that purpose, as I am sure I know nothing about bee culture and am afraid I am taking this honor away from the "City Dads", who I supposed under such circumstances were the proper authorities to welcome all to our city.

However, the one excuse I can find for doing so is that I have been a citizen of this city and county since 1867, and am now secretary of the Sangamon County Farmers' Association, and I understand that it is necessary that bees shoud be introduced into our section in order that the farmers may have the opportunity to reap and thresh clover seed, and this to my mind is of great importance, as under the present conditions we need clover to put humus into the soils. Therefore, being largely interested in this agricultural proposition, I can, to this extent, give you a hearty welcome to our county and city, and hope that your deliberations may be pleasant and profitable.

Another reason why I feel that I should welcome you, is that I am very much interested in developing side lines for the farmers of our county, and I am sure that many of the farmers should be brought to a realization of their needs in this direction, especially when our food products and living expenses are at such a high point.

The apiary, along with the poultry and dairy business, furnishes a side line for the family that must assist much, when intelligently engaged in, and will bring in a good many dollars to be used in paying their grocery bills and dry goods bills.

Besides, I have always looked upon a family who turned their thoughts and labor to the building up of an apiary as more trustworthy and caretaking than the average citizen.

To me there seems associated with bee culture a larger appreciation of home and the duties of life, so that, when I view from this standpoint the citizens of our state, I extend to you a double welcome to our city and hope that you will return to your homes with a determination to extend to your neighbors this increased privilege that should be theirs as well as yours. And that thereby their vision of good things in this world may be increased.

Our education is hardly worth while unless it enlarges our vision sufficiently to see the needs of our neighbors—county, state and country. And, if each one of us will try to help in the development of our agricultural resources and citizenship, we may look forward to a country unequaled in any respect by any other country in this or any other age. And it certainly should be the effort of every citizen possessing any acres of this once fertile land to restore it to its virgin fertility and transmit it to posterity equal in all respects to its original productiveness.

I thank you.

Secretary Stone—Before our minister gets away, I move a vote of thanks to him for his attendance at this meeting.

Motion seconded and carried.

President Baxter—The next number will be the response of the President and the address of welcome, also the President's annual address.

President Baxter—Before I proceed further, I wish to thank Mr. Newburn for this beautiful bouquet; I certainly appreciate it very much; I did not expect anything of the kind; it is very nice.

So far as the President's address is concerned, I am sorry to be obliged to say that I have been so busy during all the season I have not given it a single thought.

I was unfortunate enough to lose my main hand recently, during the month of August, the only man I had who could work with the bees; he was taken sick and died; and several hands were taken sick; I have been up against it all season.

I was unfortunate enough to advertise in one of the Bee Journals that I had some honey for sale, and there are about a hundred letters lying on my desk unanswered. I would have had to have a private secretary to answer all the letters I received.

Out of 42 barrels of honey which I had, I have only three left, so you see I have been worked to death right along.

Now, then, we appreciate very much the courteous welcome that has been extended to us by the farmers of this county, through the secretary of their Association. We have met at Springfield ever since our Society was organized and have always been treated very well and we love to come here. I do not believe we could be induced to go away from Springfield; it certainly is a nice place to meet.

Now as to the work of the season the past year: We have had a pretty good season throughout Illinois. Clover has yielded well and the flowers have yielded well in most cases, and we all rejoice at the crops we have received.

We also have received pretty good prices, and there is encouragement of a continuation in the industry, and, as Mr. Prather just mentioned, it seems to me that more people ought to engage in bee culture. I do not understand why it is that it is not taught at our University. I do not see why it is not made a special course, so that every student in agriculture could have a course in bee-keeping because it is an industry which gathers lots of products which would go to waste otherwise. It requires very little capital to start; it is an industry in which a person engaged earns lots of money if he will only work it along intelligent lines.

I have made a kind of specialty of bee-keeping, so to speak; fruit growing is my specialty; bee-keeping a side line, but I have made more money out of bee-keeping than out of the fruit business.

Every farmer could do something if he only went at it intelligently. Besides making money, it is a benefit to horticulture and to agriculture in many ways in the pollenization of the crops.

I had an experience in Nauvoo. There was bad weather during the fruit blooming time. Those orchards nearest the bees bore the most fruits. I had more pears in my orchard near my apiary than any other orchard in the city. I did not see any reason for it unless it was the pollenization of the blossoms by the bees. So it is with the apples: I notice that the orchards some distance from my home did not have so many apples as did the side of the trees that were toward my apiary. A very good indication that the bees made those blossoms first and visited them, whilst those on the other side possibly they didn't touch.

There are many other reasons why bee-keeping should be more extensively pursued than it is.

As to the problems that will meet us during the coming season: Of course we want our appropriation; we need it; we want appropriation for the Foul Brood Inspector; also the inspection work is progressing to such a point we cannot do without it. We can improve in it, but we have been doing good work. I know in some sections of the state where foul brood has been practically eliminated and with persistent intelligent work it should be eliminated all over the state. I see no reason why we should not make greater efforts than ever to get rid of that disease or those two diseases, (American and European Foul Brood). There has been a great revolution in this state at the poles recently and there is going to be a great change in methods of administration I believe.

I suppose this efficiency and economy proposition is going to pop up and I have got to be vigilant and watch it closely and see that the efficiency part of it is not obliterated. I believe in economy but not in economy at the expense of efficiency.

One proposition is to consolidate the Inspector of Apiaries and Inspector of Nurseries—the very worst thing that could be done. We want to be very careful about that.

Another thing: We want to see about our building at the State Fair Grounds. I was not able to be there, but I have kept posted on what has been done, and we have made a good start.

We had a very creditable exhibit. I see no reason why, with little effort through the total membership of the Association and through the legislative committee that will be appointed,

why we could not secure a building commensurate with our needs.

The proposition to unite the entomology department with us would be a good one. I would recommend that some effort be made with that end in view; they go along the same lines. I was here in Springfield week before last to see about our Association appropriation for the Society, and I think it is in shape so that we no doubt will get it. I think that the prospects are very good for our appropriation another season. I do not think there will be any doubt about it although some very staunch friends have been elected who are just as impressed with the necessity of keeping this up as those that have been relegated to home life.

Now then, gentlemen, I do not know anything else I can touch upon. I was in hopes we would have a large attendance after such a good crop all over the state.

We have several propositions on hand to increase our membership and I hope any one who has any project in mind that will help this Association or the industry throughout the state will not be backward in making it known.

In union there is strength and no one person can think of everything, and we are always glad to have everybody give their views and express themselves and thrash the matter out and see what is best to be done.

I thank you for your attention.

Secretary Stone — This gentleman, Mr. Prather, who is with us, is a citizen of Springfield, as he says, but he did not tell you he is quite a large farmer as well; and I want to say that the farmers of this county are beginning to sow sweet clover by the hundred acres. I think Mr. Prather is a large sower of sweet clover; if he is not, there are a number of farmers who are sowing it for the sake of getting seed, and fertility into their soil—that exists in the way of plants and that unites the farmers with the bee-keepers, and we have got Mr. Prather interested already so that he was the first man to pay his fee at this meeting.

I want to move a vote of thanks for the manner in which he has given us a welcome address.

Motion seconded and carried.

President Baxter—We will listen to the reading of the minutes of the last meeting.

Minutes of the Meeting of the Illinois State Bee-Keepers' Association, November 29th and 30th, 1915, held in the City Hall, Springfield.

The Twenty-fifth Annual Session of the Illinois State Bee-Keepers' Association was called to order by President Emil J. Baxter at 10 a. m.

The Invocation was by Rev. George T. Gunter, Second Presbyterian Church.

The Welcome Address by William H. Conkling, Secretary Springfield Commercial Association.

Response and President's address by President Baxter.

Reading of minutes of last meeting was dispensed with.

Secretary's report was read and approved.

Treasurer's report was read and referred to the Auditing Committee.

President appointed as the Auditing Committee Messrs. C. P. Dadant and Dr. Baxter.

Secretary's Financial Report was read and referred to the Auditing Committee.

The Legislative Committee reported; report approved and placed on record.

The question of affiliating with the National was discussed pro and con, and finally laid over until tomorrow morning.

The question was taken up—of getting the State Board of Agriculture to give the bee-keepers a separate or new building for their exhibits at the State Fair. One in which they might keep a honey extractor running all the time during the Fair.

The Auditing Committee was appointed to memorialize the legislature (now in session) regarding the Foul Brood Appropriation that had been curtailed—offered the resolution they had prepared, which was adopted unanimously.

The Auditing Committee reported the accounts of the Treasurer and Secretary correct—C. P. Dadant and Dr. A. C. Baxter, Committee. The report was adopted and the Committee discharged.

Dr. Phillips in his paper (which received a vote of thanks) made the statement that forest leaves made the

best winter packing for bees. And our President emphasized it by saying, "don't try to winter on poor colonies, poor stores and a lot of honey dew."

After a lengthy discussion on manner in which to proceed to obtain a building for the apiarian exhibit at the State Fair Messrs. Dadant and Dr. Baxter were asked to draft a resolution for our meeting to act upon.

The result of the election of officers follows:

For President, Mr. Emil J. Baxter, of Nauvoo, was re-elected for 1916.

Five Vice-Presidents as follows:
1st. A. Coppin.
2d. Dr. Baxter.
3d. A. L. Kildow.
4th. J. W. Bowen.
5th. Kennith Hawkins.

Secretary, J. A. Stone, re-elected.

Treasurer, Charles Becker, re-elected.

The question of affiliation with the National was taken up and thoroughly discussed and finally voted not to affiliate.

The Chair appointed as a committee on a building at the Fair the following: Messrs. A. Coppin, Dr. A. C. Baxter and A. L. Kildow; to add others if needed.

A motion prevailed to appoint a committee of three to take the matter of teaching the uses of honey to the State Superintendent of Schools, for his assistance in having it taught to the schools of the state and in the classes of domestic science.

The Chair appointed, as such committee. Messrs. Harry L. King, Kennith Hawkins and Dr. A. C. Baxter.

A motion was made to adjourn for dinner and a substitute was offered that we adjourn sine die, which latter prevailed, just as we were getting ready to go to the front steps of the Lincoln Library for a group picture.

The sudden adjournment caused that no resolution of thanks was voted to the Commercial Association.

President Baxter—You have heard the minutes of the last meeting, what is your pleasure?

Motion that the minutes be received and placed on file seconded and carried.

President Baxter—We will have the Secretary's report for the past fiscal year.

Secretary Stone—Our membership for the year, to date, is just seven more than last year—192.

Those joining the Association direct —116.

Through the Chicago Northwestern —61.

Through the Northern Illinois and Southern Wisconsin—16.

Eighteen members sent in their fees for the National, and 11 added their dollar for the Review.

On December 9th, last, Col. Charles F. Mills passed to his reward after his long and useful life. His name stands at the head of our list of charter members; and he was the principal mover in the organization of this Association. But few men ever lived as useful lives as did Col. Chas. F. Mills. As an organizer he had few equals.

Out of our 15 charter members but seven are now left.

As your Secretary did not attend either of the field meetings this year he is unable to make any report from them, except that Secretary Bull of the Chicago Northwestern sent in one dozen fees that were obtained at the Chicago meeting on the 15th of July.

This year at the State Fair was a record breaker in the honey show; more than 6,000 pounds of honey, about 5,000 pounds on exhibition, and more than a thousand pounds were extracted in the Association display; besides an additional 500 or 600 pounds of comb honey in the Association display. And there must have been over 300 pounds of beeswax, to say nothing of the vast amount in the fine display made by the Dadants. We noticed a great interest was taken in the Dadant display of apiarian implements, and we think this is a great drawing card in the apiarian department at the fairs.

We were very much elated over the display that was worked up by our State Fair Building committee; and a very important feature of that was the Assistant Secretary who obtained 34 new members and secured the names and addresses of 608 bee-keepers who were the owners of 10,338 colonies of bees.

After the displays of honey at our State Fair were all in, it was observed that there were four displays of comb honey, and only three premiums offered. And as our premium list committee had asked for an increase in the

list, without avail, we interviewed the Superintendent of the Department as to the feasibility of our committee's doing it, out of our fund; and he replied that it was the very thing for them to do.

Our committee were called together, with the following present: Messrs. C. P. Dadant, A. L. Kildow, A. Coppin, Dr. A. C. Baxter, Charles Becker, and James A. Stone.

The joint committee organized by electing C. P. Dadant, Chairman, and J. A. Stone, Secretary.

Following is the unanimous action of the committee:

Increase in the Premium List.

The Executive Committee of the State Bee-Keepers' Association, considering that the State Fair premiums were insufficient, in their opinion, to encourage displays, voted the following increase in the State Fair premiums out of their treasury:

	1st	2d	3d	4th	5th	Total
2716....	$5.00	$5.00	$5.00	$15.00	$10.00	$40.00
2724....	5.00	5.00	5.00	8.00	10.00	33.00
2726....	5.00	5.00	5.00	8.00	10.00	33.00
2727....	....	2.00	5.00	6.00	6.00	19.00
2729....	6.00	6.00	6.00	6.00	.....	24.00
2730....	6.00	6.00	6.00	6.00	.....	24.00
2734....	5.00	5.00	5.00	5.00	.....	20.00
2735....	....	6.00	8.00	9.00	.....	23.00

C. P. DADANT, Chairman.
JAMES A. STONE, Secretary.

By an arrangement between the Executive Board of our Association and the editor of the American Bee Journal, we are enabled to give a free copy of the Journal for one year to every one who becomes a member, by paying one dollar for annual membership fee to the State Bee-Keepers' Association.

President Baxter—What was the whole amount spent for premiums?

Secretary Stone—The large premiums were on comb honey, extracted honey and candied honey, and they were all put so that it makes them $30, $25, $20, $15 and $10.

President Baxter—The members will understand that that is just for the exhibit of this year.

CHAS. BECKER, Treasurer.

Secretary Stone—It remains with the Association to vote that up or down, as to what we shall do another year.

We are going to recommend that our Premium List committee go to the State Board of Agriculture and try to get them to raise it to the amount we have added to it.

President Baxter—You have heard the report—what is your pleasure?

Motion that the report be received and handed to the proper committee.

Motion seconded and carried.

President Baxter—We will have the Treasurer's report.

TREASURER'S REPORT
TO THE ILLINOIS STATE BEE-KEEPERS' ASSOCIATION.

Charles Becker, Treasurer, Pleasant Plains, Ill.

DISBURSEMENTS.

1915					
Nov.	30	84	C. Becker, Postage and Notary	$	.80
Nov.	30	85	Mrs. A. L. Kildow, Exp. at Conv.		4.16
Nov.	30	86	I. E. Pyles, Exp. at Conv.		4.16
Nov.	30	87	C. F. Bender, Railroad Fare and Exp.		3.64
Nov.	30	88	Kennith Hawkins, Railroad Fare and Exp.		5.80
Nov.	30	89	L. M. Stewart, Shorthand Rep.		10.00
Nov.	30	90	C. Becker, Exp. of Bondsmen		25.00
Dec.	7	91	C. P. Dadant, Exp. and Railroad Fare		5.04
Dec.	9	82	E. J. Baxter, Exp. and Railroad Fare		7.76
Dec.	26	93	E. H. Bruner, Postage and Exp.		37.00
1916					
Feb.	16	40	L. M. Stewart, Shorthand Rep.		168.50
Mar.	2	41	Burton M. Gates, Exp. to Conv.		40.00
Apr.	20	42	Ill. State Register, Printing Reports.		388.00
Apr.	30	43	Jas. A. Stone, Exp. and Reports		50.00
Apr.	22	44	C. P. Dadant, Attd. Committee Meeting		7.00
Aug.	3	45	E. J. Baxter, Attd. Committee Meeting		8.35
Sept.	23	46	G. Seastream, Premium Offer		16.00
Sept.	27	47	A. Coppin, Premium Offer		40.00
Sept.	27	48	C. Becker, Premium Offer		40.00
Sept.	27	49	Valentine Ambrose, Premium Offer		25.00
Sept.	27	50	J. A. Stone & Son, Premium Offer		33.00
Sept.	27	51	Harry L. King, Premium Offer		6.00
Sept.	27	52	A. C. Becker, Exp. Making Exhibit		102.52
Sept.	27	53	Aaron Coppin, Committee Meeting		4.50
Nov.	3	54	E. J. Baxter, Committee Meeting		14.32
Nov.	7	55	C. Becker, Salary for 1915		25.00
Nov.	7	56	Jas. A. Stone, Exp. for Supplies		87.95
				$	1,159.50

Balance on hand Nov. 15, 1915	$	1,336.21
July 20, From State Treas.		1,000.00
Total	$	2,336.21
Cash in Association Fund Nov. 15	$	186.94
1916—Nov. 7, By Check from J. A. Stone		114.50
Total in Association Fund	$	2,637.65
Paid J. A. Stone	$ 100.00	
Balance on hand, Association Fund	201.44	
Total	$ 301.44	
Balance on hand in Association Fund	$	201.44
Paid J. A. Stone		100.00
Paid into State Fund		1,159.50
Cash on hand in State Fund		1,176.71
Total	$	2,637.65

CHARLES BECKER, Treasurer,

Audited November 15, 1916, and found correct.

C. P. DADANT,
HARRY L. KING,
I. E. PYLES,
Committee.

President Baxter—Shall the report be received and referred to the Auditing Committee?

Motion seconded and carried.

President Baxter—I will appoint on the Auditing Committee Mr. C. P. Dadant, Mr. Pyles and Mr. King.

President Baxter—Now then, gentlemen, you see that our treasury is in very good shape, and that the money is for the purpose of advancing bee culture within the state, and the money that has been spent for premiums and otherwise has been very wisely spent and, of course, we want to continue to spend the money for the interest of the calling as much as possible and, at the same time, we want to make as strong an effort as we can to have the State Fair management make adequate provision for premiums, so that we will not have to make up the premiums out of our fund. Of course, if we cannot get it, it is up to us, but I think we had better leave it to the judgment of the Executive Committee and not go on record as ordering premiums paid out of our treasury.

President Baxter—We will listen to the report of the committees. We had several standing committees, Mr. Secretary. The committee on legislation I suppose have nothing to report.

Secretary Stone—I could not find in my Minutes any committee on legislation.

Dr. Baxter—My understanding is the committee was President Baxter, the Secretary, and Dr. Baxter.

Mr. Stone—My recollection is we talked about it and said it was not a year we needed a legislative committee, because it would not be until this year we could use one, but my recollection also serves me we appointed the Executive Committee with Dr. Baxter added for Chairman, because he was right here at Springfield—for the legislative committee.

The motion was the Executive Committee be the Legislative Committee; as I remember, it was that way, and in Mr. Becker's place we appointed Dr. Baxter for Chairman, because he was right here and could attend to it, and he did it well.

President Baxter—We have had no use for the committee this year, so that is immaterial.

Mr. Stone—The Legislature was in extra session at that time and the Doctor kept it stirred up.

President Baxter—We got what we wanted anyway.

Mr. Stone—The Foul Brood Bill was back in payment and that was attended to.

Dr. Baxter—The report of the Executive Committee follows:

Mr President and Members of the Illinois State Bee-Keepers' Association: Your Committee on State Fair Exhibit begs leave to report:

That they placed the Illinois State Bee-Keepers' Association on the second floor, southwest corner of Dome building, on the Illinois State Fair Grounds. This exhibit consisted in showing bees, the various grades of honey, how produced and how extracted honey was obtained. About 1,800 pounds of the latter being extracted. This exhbit and interests of the bee-keepers were looked after by Messrs. Kildow, Pyles, King, Withrow, and Baxter. The cost of the exhibit was $101.27, which was expended as follows:

Painting sign, to Jas. D. Sheehan.	$ 6.00
Celluloid for Foul Brood Frames, to W. L. Blucke...	.75
5 tables and 3 chairs, to R. H. Armbruster Mfg. Co.	5.75
36 yds. muslin @ .06 yd., to Herndon & Co.	2.16
10 yds. muslin @ .07 yd., to Herndon & Co.	.75
Hardware, to Hudson	.70
2 gal. alcohol, to R. N. Dodds Co..	1.70
1 cabinet for various grades of honey, Power's Planing Mill....	28.00
To Mrs. Caldwell, as Secretary...	8.00
Printing, to Jeffersons	4.25
Painting small sign, to Arthur Huntington	3.00
Express two ways, to Kildow.....	.96
Drayage and freight to and from Fair Ground (2 men), Transfer Co.	14.75
One observation hive with super, to A. I. Root Co.	10.00
Wax for letter design, 10 lbs. @ .25 lb., to Baxter	2.25
Painting cabinet, to George Dellert	3.00
Pictures of honey exhibit for Bee-Keepers' Report	9.00
	$101.27

The Chairman of your committee received from the Treasurer check for $102.27, leaving a balance of $1.25 in the hands of the Chairman. The Chairman has in his possession the following property: 1 observation bee hive and super..... $ 10.00

1, Chas. L. Kruse; 2, I. E. Pyles; 3, Wallace R. Beaver; 4, A. O. Heinzel; 5, G. W. Strunn, 6, W. H. Williams; 7, J. D. Harris; 8, Fred Crum; 9, Rev. C. Warber; 10, H. W. Mandle; 11, Thos C. Woolsey; 12, W. E. Albright; 13, Frank Bishop; 14, Mrs. G. M. Withrow; 15, G. M. Withrow; 16, C. H. Wiley; 17, J. W. Newburn; 18, Miss Lilian M. Stewart Stenographer; 19, Wilson King; 20, C. P. Dadant; 21, Robert O'Neil; 22, Joseph Galushka; 23, E. R. Root; 24, George Seastream; 25, W. H. Baker; 26, Mrs. Harry L. King; 27, C. E. Bender; 28, Harry L. King; 29, A. L. Kildow; 30, Jas. A. Stone, Secretary; 31, Emil J. Baxter, President; 32, Chas. Becker, Treasurer; 33, Aaron Crespin; 34, Dr. A. C. Baxter, 1st Vice-President.

1 cabinet	$ 28.00
1 wax design	2.50
Total	$ 40.50

A stenographer was placed at this exhibit to obtain all the names of bee-keepers and the number of colonies of each. Six hundred and seventy-eight names were obtained, representing 10,348 colonies of bees, and 34 new members were added to the Association.

From the interest shown by the public in this exhibit, your committee recommended the continuance of this exhibit by the State Association as it believes that by this method the public can be brought to the realization of the value of honey as an article of food and thereby increase the demand for honey.

Signed ALBERT C. BAXTER,
Chairman.
A. L. KILDOW,
AARON COPPIN.

Motion was made that the report be adopted, which motion was seconded and carried.

Dr. Baxter—Your Committee on State Fair Building begs leave to report:

That they "looked up the matter" of a building on the Illinois State Fair Grounds to be devoted to the interest of bee-keeping with the members of the Illinois State Board of Agriculture and all members were of the opinion that it would be an excellent thing to have such a building and advised your committee to have plans drawn for such a building, and, after having the Board of Agriculture approve said plans, a committee from both bodies should go before the legislature and ask for appropriation to build this building.

In accordance with this idea, your committee has had such plans made, which are now in the hands of your President. Since these plans have been made your committee has discovered that some changes should be made in regard to the extracting room, and would suggest that this room be built in "Amphitheatre style" so that the top of the extractor could be easily seen while the spectators were seated.

Your committee suggests that these plans be examined by this Association so that they may have a clear understanding of what is being done in regard to this matter and to offer any suggestion that may be of service to your committee.

(Signed) A. C. BAXTER,
Chairman.
A. L. KILDOW,
AARON COPPIN.

Dr. Baxter—It was the expectation that the President would have the plans here and he has informed me that, in his hurry to get away, he left them at home. Now, every member of the State Board of Agriculture, except two, have been interviewed in regard to this matter and a majority of the newly elected legislature. We have not met with any one who has seriously discouraged us; they have all been in favor of it and believe it would be a good thing; the only thing was, where the money would come from.

As you all know, the incoming administration is pledged to economy and efficiency. Now, there is a question that comes to my mind: Will the new administration be for us? I have been informed that they would; of course we cannot tell what other appropriations may come up but the thing for us to do is to simply go ahead with our committee and have either the same committee or another one appointed to go before the Legislature with the committee from the Board of Agriculture.

Since these plans have been drawn we have also thought it would be a good thing for the Department of Entomology of the State University to be in that building. While they are slightly allied to us in one instance we thought they might lend some weight to the committee, especially if we could get the Dean of the University interested.

I have written several letters to the Dean and have had answers that he would think the proposition over.

He was not very warm towards bee-keepers, for some reason probably known to some of the older men, but he thought that a little later he could see us. He informed me he would be over here possibly in December and would call upon me. I think he will help us; I cannot see any reason why we should not get this building; it will possibly not be a sure

thing for this next Fair, but for the following Fair.

I am sorry that the President has forgotten the plans and left them at home; I was very anxious for you to see them.

The building will cost, as planned, in the neighborhood of $20,000, one story building, brick wall; part of the room for the exhibit of honey is to be something after the manner in which honey was displayed at the World's Columbian Exposition.

The bees to be on exhibit will all have exits through the wall, the tube method, something like they had at San Francisco. Bees, as you know, shut up in the hive do not show the bees as they are seen by the public; they are racing around and they get a false idea of bees.

The extracting room is simply built in the form of an "L", the entrance of which is screened; the extractor would be in what would be in the basement floor; the spectators could be on the sides, be comfortable, eat a little honey if they cared to, and look into the top of the extractor and be convinced that it was not adulterated honey.

I have had my heart in this project and I think it is a good thing. I think to educate the people especially on the line of extracted honey would be an excellent thing; there seems to be a fear there might be something in extracted honey; a great many feel we get extracted honey by putting the comb in the wash tub and chopping it up with a spade and straining it in a flour sack; they don't understand it; they don't understand it can be pure. So I think it is up to the bee-keepers to educate the people in this line.

Dr. Baxter—I move the adoption of this report.

President Baxter—Gentlemen, here is the report of your committee on State Fair Building. I would recommend that the report be adopted and that the committee be continued; their work is incomplete; the legislature meets this winter, and this winter is the time we have got to ask for the appropriation. If that meets with your views, any motion you wish to make will be entertained. What is your pleasure?

Mr. Kildow—Mr. President, it seems as though they don't know what they want to do; if they want this committee to go ahead, they want to say so.

President Baxter—It is with you, gentlemen, whatever your pleasure is.

Mr. Stone—I want to make a motion that this report be received and the committee continued.

President Baxter—Is there a second?

Motion seconded and carried.

Dr. Baxter—Mr. President, Members of the Illinois State Bee-Keepers' Association:

Your Legislative Committee begs leave to report:

That on November 1st, 1916, they filed with the Legislative Reference Bureau to place in the budget the request of the Illinois State Bee-Keepers' Association for an appropriation of $1,000 from the Illinois State Legislature to be used as follows:

For publishing report	$ 500.00
For stenographer work	200.00
For expense of convention....	100.00
For stationery and postage...	100.00
For field work meetings.....	100.00
	$1,000.00

Respectfully submitted,

A. C. BAXTER Chairman.
JAMES A. STONE.

Dr. Baxter—The old method in which we obtained funds was to have a member in the House and Senate introduce our Bill, which would give us $1,000. Then we had to go before the Finance Committee and defend it. By this method it is put before the Finance Committee by the Reference Bureau, which makes up the budget for the state of Illinois. Of course we will probably have to defend it before the Finance Committee just the same, but there is a question in my mind about this method.

I have not been able to determine by that method where we can use this money for any other thing except as it is specified in what I have filed; in other words: "For publishing report $500.00"; if we only use $350, the rest cannot be used for anything but publishing the report, and our Secretary will have to make a report to the Auditor and the State Treasurer of what the money has been used for.

I have not been able to determine everything I want to know about this

budget; whether we can use the money for any other purpose as we have done heretofore, so I really cannot say whether I am for the method of sending it through the Bureau or having some of our members have the members of our legislature introduce the Bill, and that is the question that I would like to have the Association or the Executive Committee to determine. If I am on the Legislative Committee I would want to know.

President Baxter—You have heard the report of your Legislative Committee, what is your pleasure? A motion to receive the report and place it on file will be in order.

Dr. Baxter—I move that the report be received and placed on file.

Mr. Stone—I don't know whether it is necessary to say what I want to say before it is voted on or not. I think we will have to offer that in the shape our Bill has been offered in other years and then it would pass into the hands of our Treasurer, and if we do not pay that $500 for that report we will have it there to use for other things, like in the Fair, or anything in the interest of the Bee-Keepers' Association.

In the Bill it reads:

"Be it enacted by the People of the State of Illinois, represented in the General Assembly: That the Governor shall appoint a State Inspector of Apiaries, who shall hold his office for the term of two years, and until his successor is appointed and qualified, and who may appoint one or more assistants, as needed, to carry on the inspection under his supervision. The Inspector of Apiaries shall receive for each day actually and necessarily spent in the performance of his duties the sum of four dollars, to be paid upon bills of particulars certified to as correct by the said State Inspector of Apiaries, and approved by the Governor."

Mr. Stone—Now, that covers everything, and if we get it as outlined in that list we will have to spend it for those things and nothing further. If we had not been given that right as I have read we could not have done anything to make that showing at the State Fair, we could only have published the report and have given it to the bee-keepers, and that ends it; it curtails all the usefulness of the Association if we are cut short in what we want to do with the money, for the good of bee-keepers.

Dr. Baxter—That is true, but under that efficiency and economy proposition every dollar that is spent has got to go through the budget; this society, the State Horticultural Society, the Livestock Association; by all of them the budget is to be made.

I believe we ought to make our budget exactly like this: We ought to have a fund for miscellaneous expenses and it should be so stated so that we can use them for anything else we want to. It think it would be a good idea for us to go down to see what the State Horticultural Society has done; they have got to have funds for emergencies and we ought to have.

President Baxter—I question if we are under this plan if we can draw the thousand dollars and use it. I think we would have to draw it through the State Auditor.

Mr. Stone—It would stay in the hands of the State Treasurer. Two years ago they sent us the same blanks; there is nothing in there for us to fill out; we don't own anything we have got to give an account for; they wanted us to enumerate the desks we have, etc. Two years ago we got those blanks and took them back to Mr. Bell and said we wanted to be outside of that and he let us off. We got our appropriation all right.

Mr. Prather—May I ask a question or two? When you go in for an appropriation through the legislature do you have to file with the Reference Bureau this matter; is that compulsory?

Dr. Baxter—It is not.

Mr. Prather—If you do file—is it not possible to give more items in that filing?

Dr. Baxter—It would be possible.

Mr. Prather—It seems to me this ought to be left to the judgment of your Legislative Committee, but if they are going to file it with the legislative committee they ought to have more items and, if possible, as suggested by your Secretary, get in something for sundries.

Mr. Stone—I do not understand that binds us to anything.

President Baxter—All in favor of the motion say aye.

Motion seconded and carried.

Mr. Stone—It remains for us to instruct our Legislative Committee.

President Baxter—Are there any other standing committees to report? There is a Committee on Domestic Science, placing honey in the schools.

Mr. King—There has been nothing done.

President Baxter—Now we will hear the Auditing Committee's report.

Mr. C. P. Dadant—The Auditing Committee have examined the report of the Treasurer and find the vouchers and everything correct; the only thing for which we have no itemized account is: Paid in by the Secretary from members, $114.50.

The Auditing Committee signs the report as correct—with a balance of $201.44 in the Association Fund; paid J. A. Stone, $100.00; paid into State Fund, $1,159.50; cash on hand in State Fund, $1,176.51; total, $2,637.65.

President Baxter—You have heard the report of your Auditing Committee, what is your pleasure?

Motion that the same be accepted, seconded and carried.

President Baxter—We have a few minutes yet before we adjourn. Mr. Pyles, we will have the Question Box.

C. P. Dadant—Don't you appoint committees in the forenoon?

President Baxter—Yes; we should have a Committee on Resolutions.

Mr. Prather—Mr. President, may I ask—Have you some kind of an organization in each county of the state looking to the securing of membership?

President Baxter—No, sir, we have not.

President Baxter—I do not know of any provision for the appointment of anything except the Auditing Committee; I think we should have a Committee on Resolutions, a committee of three.

Motion made and carried that a committee of three be appointed to draft resolutions.

President Baxter—I will appoint on that committee Mr. Dadant, Mr. Coppin, and Mr. Kildow.

Mr. Stone—If there is nothing else on hand, I will present a matter relative to what the Michigan Association did regarding the cost of medals.

Michigan Affiliated Bee-Keepers' Association.

East Lansing, Mich.
Oct. 13, 1916.

Mr. James A. Stone,
Springfield, Ill.

Dear Sir:

Some time ago you expressed a wish to know something more about the cost of the medals such as the Michigan Association are giving.

Last year we gave challenge medals with L. L. Langstroth's portrait shown on one side, a cut of which appeared in the different bee journals. Two of these medals were donated to the Association, and one was given by the Association itself. These medals have to be won three times before becoming the property of the bee-keeper. This year, we are planning to give, besides these three medals, a silver and bronze Langstroth medal, for bulk exhibits of extracted honey, the exhibit to be about 150 pounds.

Dr. C. C. Miller has sent us a good photo, and we plan to give two Miller medals for a bulk exhibit of about 150 pounds of comb honey. Four medals are to be won outright.

The cost of the die for each medal will be from $35.00 to $40.00. The silver medal will cost about $10.00, and the bronze about $5.00. We are taking this matter up with our jeweler within two or three weeks and, if you would care to participate, we should be very glad to hear from you within that time. I am writing to three or four Associations and, if all take up the medal idea, it will reduce the cost of the die to a small amount each.

We found the giving of the medals a drawing card, and one much appreciated by the bee-keepers, and we feel sure that this year, with the giving of the additional medals, and other features which we are introducing, that we shall have a successful meeting. We should certainly be glad to have you with us, and meet some of our prominent bee men.

Thanking you for your early attention to the medal matter, and with best wishes for a successful convention.

Very truly yours,
(Signed) F. ERIC MILLEN,
State Inspector of Apiaries.

FEM-MHC

Mr. F. Eric Millen,
East Lansing, Mich.

Dear Sir:

The matter of medals, that you named in your letter of the 13th, will need the action of our convention, which meets in the Senate Chamber of the State House on the 15th and 16th of November, so we will be unable to act for this year's convention. In case the action is favorable, I will be pleased to write you later.

Very truly yours,
(Signed) JAS. A. STONE.

President Baxter—I believe, gentlemen, this is a matter worthy of consideration, and we will take it up later and see what we want to do about it; I believe it is a good thing.

Mr. Stone—Mr. President, as he named there, they have been giving medals, gold and silver, and the object is to make the best display of honey at their meeting; they only hold the medal for one year, but, if they win it three times, it is theirs.

President Baxter—That matter was thoroughly discussed last winter at the Chicago-Northwestern by Michigan parties, and it seemed to be a big drawing card.

Mr. Coppin—Mr. President, where would this exhibit be?

President Baxter—It would be right here at Springfield at our meeting. We could prepare for it somewhere.

Dr. Baxter—It would probably take the meeting away from the State House; have the meeting in the City Hall or somewhere else.

President Baxter—Are there any questions?

Question—I have a colony in a box hive. How will I, and what is the best way to get them into a modern hive?

President Baxter—This man has a box with bees in it and wants to know the best way to get them in a modern hive, and how.

Mr. Coppin—Transfer them in the spring of the year, the best I know of.

President Baxter—The directions for that are given in most all of the bee papers, very explicit directions.

Mr. Stone—I suggest that the Chair name a man to answer that; that has been asked by some man who is beginning; he is here to learn and we are here to tell him what he wants to know.

President Baxter—Mr. Coppin can answer that, I expect.

Mr. Coppin—There are a number of ways it could be done; the way I had good success the last spring was, I drummed the bees out of the box hive instead of tearing it up and tearing the old combs out, which is a disagreeable job. I don't follow that method any more. I drum the bees out and put them on foundation. I place the new hive where the old one stood and place another box about the same size as the old box hive on top; take two hammers and drum with both hands on both sides of the hives and all around and by that time most of the bees are up in the old box. A good method is to lay a cloth down under the new hive and drum the bees down; see if you have the queen, and the job is done. The question is to get the queen from the old hive; if you don't see her, play another tune by drumming. If you can't find her, put the old hive on top and look in a day or two and you can tell if she is there. If you miss the queen, put on a queen excluder.

Mr. Kildow—If you are new in the business, don't go to drumming without using some smoke.

Mr. Coppin—Use a little smoke; the bees don't think about stinging. Fruit blooming is about the best time to do that. Then you get your colony ready for the honey flow—white clover.

Mr. Pyles—If I wished to transfer bees or get them out of the box hive I would simply let the bees get strong enough or make them strong enough to swarm—and they will always go to work after they have swarmed without sulking. I think, however, a cloth with carbolic acid will get them out faster than drumming.

Mr. Coppin—Any bee-keeper can spare a comb of honey necessary to put in the lower hive and there will be no sulking at all. Have a box hive running above and they will go right to work. I have transferred hundreds by all kinds of methods and I find that is the easiest way out of it I can get. By waiting, getting them to swarm,

you might wait too long and the honey flow be over before that swarm.

President Baxter—I believe I agree with you, Mr. Coppin.

Convention adjourned until 1:30 p. m.

AFTERNOON SESSION.

November 15th.

Meeting convened at 1:30 p. m.

President Baxter—The first thing this afternoon will be the report of our State Inspector of Apiaries, Mr. Kildow.

Mr. Kildow—I want to state we have tried to clean up the territory we have started so we have not spread a great deal yet. We think it best to take a certain territory and try and get it thoroughly cleaned and get the people in that neighborhood educated so that they can clean up themselves, with now and then giving a little help to the new beginner.

Sixth Annual Report—1916.

Date	No. Colonies	No. Apiaries Visited	No. Apiaries Diseased	No. Having A. F. B.	No. Having E. F. B.	No. Days	Expense	Incidental	Per Diem	Remarks
1915										
*Nov. and										
**Dec.	...	...	...	..	..	6	$ 14.11	$ 1.00	$ 24.00	By Inspector
1916										Reports,
March	...	...	...	..	..	.....	.....	11.17	.....	Vch'rs, etc.
April	110	2	2	2	..	9	18.17	2.25	36.00	By Inspector
April	63	9	2	1	1	2	.....	.....	8.00	By Deputies
May	312	16	7	1	6	11	21.02	1.74	44.00	By Inspector
May	1233	100	33	19	14	25	36.16	.....	100.00	By Deputies
June	620	28	17	16	1	12	19.19	4.30	48.00	By Inspector
June	326	32	7	2	5	10½	17.42	.....	42.00	By Deputies
July	632	30	4	4	..	17	24.70	1.00	68.00	By Inspector
July	1092	76	23	4	19	21½	24.16	.....	86.00	By Deputies
Aug.	670	10	3	3	..	10	33.75	1.00	40.00	By Inspector
Aug.	1064	29	20	11	9	24	27.02	.....	96.00	By Deputies
Sept.	...	...	...	..	..	.....	.....	3.25	.....	Letterheads
Sept.	432	1	1	1	..	†17	21.95	2.39	68.00	By Inspector
Sept.	...	...	...	..	..	§ 6	11.14	.....	24.00	By Deputies
Sept.	765	40	12	8	4	15½	12.81	.....	62.00	By Deputies
Oct.	62	5	5	5	..	6	10.27	.....	24.00	By Inspector
Oct.	20	1	...	..	..	1	.....	.....	4.00	By Deputy
Total	7401	419	136	77	59	193½	$292.14	$28.10	$774.00	Grand Total: $1,094.24

*State Convention at Springfield.
**Convention at Chicago.
†Inspection and Instruction Work.
§Instruction.

A. L. KILDOW,
State Foul Brood Inspector.

Mr. Kildow—Total number of colonies examined, 7,401; in 419 apiaries, 136 being diseased, 77 American foul brood, 59 European foul brood. Total amount expended was $1,094.24.

Sixth Annual Report.

A. L. Kildow, Chief Inspector.

During the last two years as much work has been done along the educational line as in inspecting apiaries, and the results have been even greater than before.

We find that, as the bee-keepers learn more about foul brood and its results, the more interest they take in trying to rid the country of the disease. This is clearly shown by going over the territory where we have formerly been. Great improvement has been made in various parts of the state.

Vermilion County as far north as Danville is clean, with possibly one exception (at Fairmount) which will be looked after in the spring.

The severe outbreak at Paris has been suppressed, thus preventing its spread. And in and around Lincoln, where foul brood was so severe a few years ago, the disease has been so handled that only about 1 per cent of the bees now are diseased.

In the northern part of the state we also find great improvement, the bee-keepers have become so interested that they not only look after their own bees, but help their neighbor bee-keepers, who have not as yet learned just how to handle the disease.

There are just samples of what exists in the different parts of the state where the Inspector and Deputies have worked.

President Baxter—Has any one any remarks or any questions to ask on this report?

President Baxter—Mr. Kildow, what was the result of these instructions; what did you do besides examining them?

Mr. Kildow—I gave them instructions; told some of them how to treat them.

President Baxter—Did you follow it up and be sure that the treatment was done as instructed?

Mr. Kildow—I went back to most of the places a second time to see how they were getting along; I found they were following instructions and showed marked improvement.

President Baxter—Were these apiaries all cleaned up?

Mr. Kildow—They were cleaned up as far as I know; there may be some outbreak in the spring.

President Baxter—Has the cleaning been done systematically so that the probability is they won't break out again?

Mr. Kildow—Some of them do not exactly understand and they make more or less a block of it. They were doing the best they could under the first treatment; it is only once in a while you find a person that catches on to your instructions good enough to make a good job of it the first time.

President Baxter—I believe I would go over it all again; see if it has been cleaned up, and, if not, I would clean it up for them.

Mr. Kildow—We do that; we go back over them two or three and some times the fourth time, until we see they are getting along all right.

President Baxter—We want efficient work, like in Hancock County, and make them obey orders.

Mr. Kildow—The territory we have been over is showing up the best kind. There is now and then a party who does not do as you want him to do. But it is hard to force them to do what they don't know how to do. We have got as many different minds as we have men, very nearly, but in general they are doing well.

President Baxter—You say in all this territory you have been through that the cleaning up process has been efficient and foul brod is on the decrease?

Mr. Kildow—Around in Lincoln, where it was so bad, there is not more than 1 per cent of it left any more. It takes time for these things; it takes time to educate the people

Mr. Dadant—How many deputies are there?

Mr. Kildow—We have only been using four, I think.

President Baxter—I see you have only spent $1,000—$1,010; if if you had six or eight deputies, could you have cleaned up there?

Mr. Kildow—I might have. Last year the Civil Service held an examination but they never sent me a list of deputies.

President Baxter—Why didn't you ask for it?

Mr. Kildow—I went down this morning to find what they had, but I couldn't. Where these deputies are, I don't know only two of them; they sent me two; they replaced two of my old ones, but have never sent me a list of deputies.

President Baxter—You should write to them and have them do it.

Mr. Kildow—I am going to find out about it as soon as I can get an interview with the Civil Service Commission.

Mr. Stone—Does the Civil Service give them an examination that is satisfactory to you?

Mr. Kildow—They don't ask me anything about that.

Mr. Stone—When you know the results, do the men turn out satisfactorily? Have they done any work?

Mr. Kildow—Only one of them has done any work.

Mr. Heinzel—The deputies all took civil service examination.

Mr. Pyles—The deputies that have been doing the work took examination and all passed except one or two that they replaced; the State Inspector has no way whatever of appointing any one and drawing pay unless he can get a list from the Civil Service.

President Baxter—How many deputies were at work this summer?

Mr. Kildow—Four—five part of the time.

President Baxter—That includes old and new ones?

Mr. Kildow—Only one new one that has done any work.

President Baxter—Does the balance of our appropriation return to tne Treasury that is not used?

Mr. Kildow—Yes.

President Baxter—It would be well to use all the money. We would have that much more territory cleaned up and also get the same amount for another year.

President Baxter—I would move heaven and earth until I got it.

Mr. Williams—I am a new man; perhaps I will take up more time than I ought to. I understand like this: If the State Inspector wants more help, he must ask the Civil Service Commission for that help, and then they will appoint a man for him, otherwise he won't get it. The Inspector will never know who is on the list unless he gets behind the scenes some way, which he is not supposed to do.

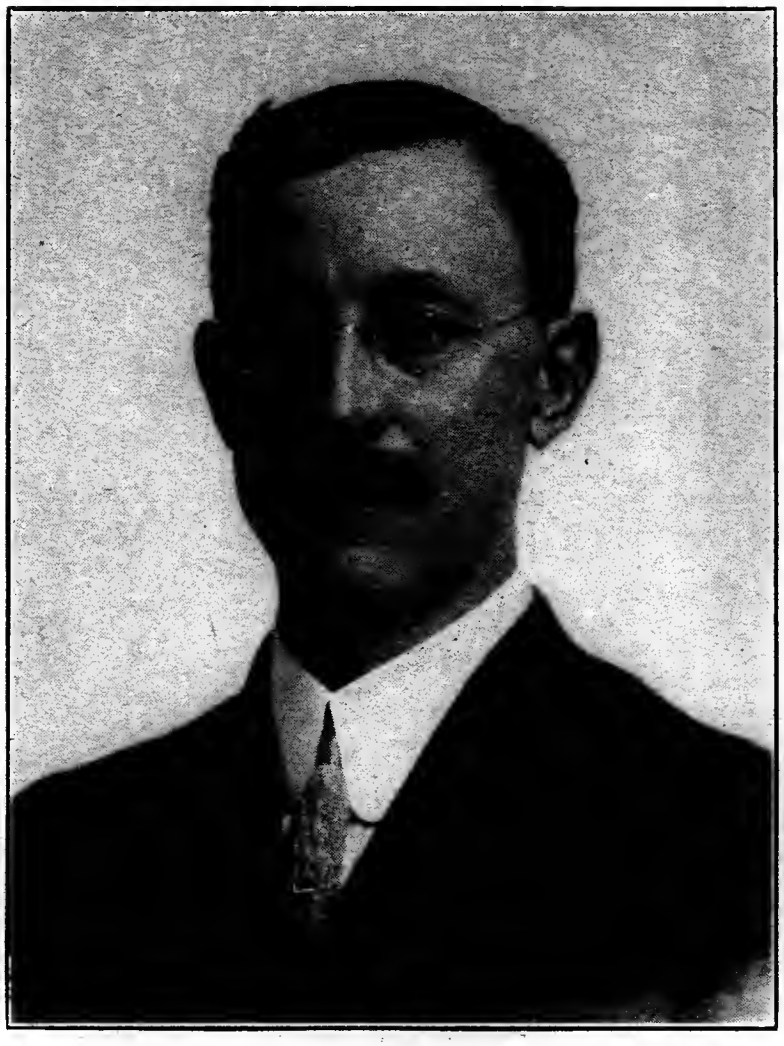
Mr. Kildow—I will get behind the scene if possible.

Mr. Williams—I don't think you can do it; you may be able to. I have taken the Civil Service examination several times and have had two appointments under the Civil Service, and the appointing officer didn't know I was one of the men who would be appointed. You make your request, the Board, who is the appointing power, sends you some names and you can select the men you want. I don't think he can get in any other way.

President Baxter—Any other questions or remarks?

President Baxter—Our next number for this afternoon is:

Establishing a Trade Name in Honey, by Mr. E. R. Root, Editor of "Gleanings In Bee-Culture."



E. R. ROOT.

Mr. President, Members of the Convention:

I believe I have not had the opportunity to address this Association before. I want to congratulate you upon the fact that you are the only state organization, so far as I know, that has an appropriation. Certainly I know of no organization that has the amount you have available, $1,000 a year for general work, which you get from your legislature. I congratulate you upon what you are doing in the way of preparing exhibits and what you propose to do. I congratulate you further on the Legislative Committee you have.

Coming to my subject: The time was when honey was sold in a very different way than it is today; it was sold in a most haphazard manner, put up in all kinds of ways and by all kinds of people, without any conception of the demands of the grocer or the trade.

Every bee-keeper was competing with every other bee-keeper. No one of them scarcely had any idea how to put up honey for the retail trade. Honey was sold in bulk and that was proper enough. Honey was sold in half barrels, in tin cans, and the business was all right so far as it went. but it was not sold in small packages.

Some few years ago the National Bee-Keepers, through another organization, attempted to raise funds, and they did raise some, to advertise honey, to popularize honey, to establish a trade name, but it did not succeed very well.

Observing the price of honey was going down right along, my associates and myself said something ought to

be done to build up the name of honey; something ought to be done to introduce honey to the millions that are not now taking it; to get it before them in small quantities; to get it in all the restaurants and hotels and into the Pullman cars. We discussed the problem of getting honey in the minds of every one so far as we could, and particularly to get it before the housewife.

A definite program we felt must be undertaken, and when that came before us we said, we can't advertise honey without advertising everybody's honey and we will pay the bill. We finally decided, however, that we would launch out in the field and experiment and see what the results might be.

Already there were some in the field bottling honey and had a fairly good trade, but they didn't have the trade name. Honey was not known all over the United States. Honey was not known in Pullman cars. Honey was not known in restaurants except in very narrow circles. It seemed to us there ought to be some sort of a program that would bring honey before the minds of all the people all over the United States, so that every housewife in the proper season and all through the year would be thinking about honey.

Some kind of advertising should be brought before the public to make them think of honey. We began with a modest program, as we thought. We called in an expert, the expert who put Coca Cola on the map and, if you know of any product that is advertised more extensively than Coca Cola, I wish you would point it out. I think if you go into any ordinary soda fountain and stay there a little while you will see Coca Cola is called for once out of three to five times, because it has been advertised; because it has a trade name; it is continuously advertised, and so much so that competitors are trying to get hold of the name.

Think of it, here is an article against which Dr. Wiley and all his force have been arrayed; many people think they cannot drink it, that it is a narcotic of some kind. And in spite of all prejudice this is advertised and sold on trains, advertised on every bill board and on street cars and in every magazine. If that article sells, what can we do if we take an article like nature's sweet, like honey, and push it and keep it in the mind of the public continuously?

If honey is advertised and brought before the public properly, it will be found on the table every day and used by every householder in the United States. If we keep at it we will get it there.

In spite of all the advertising that has been done, I venture to say that you can go into a dozen families and find no honey used. I speak before popular audiences and I am surprised, in spite of all the advertising done heretofore, how many people think comb honey is manufactured and that ordinary liquid honey is adulterated with glucose.

Now, then, when one starts to build up a trade name, the public naturally concludes he is putting out an article that must be pure or he would not dare to advertise it and sell it. We are finding this out by our own experience. Where one advertises his honey in an extensive way, the public is getting hold of the idea that this honey must be pure and all right; It cannot be manufactured or he would not put it out and advertise it everywhere.

To give an illustration:

Dr. Phillips and I came from Chicago, I think it was two years ago, when we just started on a campaign of national advertising. When we went into the dining car of the Pulll-man, Dr. Phillips said: "We will ask some questions of the porter." "Have you any honey? Is it good and pure?" The porter said: "Yes, it is pure, all right."

We asked a good many questions about that honey. He finally said: "Sure. this honey is pure; I will have the chef come in."

I said to the chef: "Have you got any other honey?"

He said: "No. Is not this honey all right? Why do you ask the question?"

I asked him: "Haven't you any other honey?"

"We might have," he replied, "but nobody asks for any other."

What was the reason for this? Because of our national campaign of advertising. It is because we adver-

tised that honey and the people asked for the brand that they knew about.

I took a bunch of young people out to a pleasure resort. We wanted some raw oysters and some one said: "Get some catsup." I called for some catsup. The grocer asked me what brand I wanted. I could not think of any other brand but Heinz, and asked for that. I asked him: "Have you any other brand?" He said: "Yes," and named over two or three. I asked him: "Which is the best? Which sells the best?" He replied: "Heinz, ten to one."

What makes it sell? Because whenever you think of catsup you think of Heinz. And when you think of Heinz you think of 57 varieties. Who has put it there? Somebody has paid out enormous sums to advertise that in magazines so that it is known all over the country.

Take the word "beans" and Van Camp's name comes into your mind, and simply because you see that advertised everywhere.

We might go on clear down the line. I could talk about Pillsbury flour, the Gold Medal. I said to my wife one day: "What kind of flour do you use?" And she replied: "Gold Medal." "What for?" "Because it is good flour." "How did you happen to know about it?" "I don't know." But I said to her: "There must be some reason for it." "Why," she said, "I saw it advertised in the Ladies' Home Journal and these various other magazines."

Don't you see that advertising by a trade name gets the thing thoroughly in the mind of the public? If you will notice, these things that are advertised, that have a trade name, bring a higher price on the market than one that is not advertised and has no trade name.

I might say here, in passing, that any of you who attempt to establish a trade name and put that product before the public, when you take one page of advertising in the Ladies' Home Journal, and several other journals, you will understand what it costs. Why did we take those magazines? Because they go to the women. We advertise in journals that go to the housewife; she is the one to get hold of them, and, if we get the housewife, we will get the men.

When the advertising solicitor came around he said to me: "Mr. Root, you have got your product up to a certain point, you want to get your 42 centimeter gun out. If you want to break through a door what are you going to use, your knuckles? You take a sledge hammer and smash the door in. Now is the time to take your sledge hammer and blaze away at it." He said: "Put a whole page advertisement in the Ladies' Home Journal."

I said, "No." When he said it would cost $6,000 I said "No."

I said: "We will advertise in a smaller way and keep everlastingly at it."

"When is your season for selling honey?" he asked.

I told him: "It begins early part of the season, along in September, and reaches its height about October."

"Yes, exactly," he said, "you want to strike your sledge hammer blow at that time."

We agreed to that and began to advertise. You remember that full-page advertising in the Ladies' Home Journal. It spoke about honey as food; it spoke about Airline, of course; it also spoke about honey on waffles. Waffles were pictured showing honey dripping around, and a beeyard. It spoke of honey being a predigested sweet.

We advertised everybody's honey. The results were sledge hammer blows. I think if you were to go down and look at our plant and the Weber company plant, and two or three other bottling concerns, you would find honey going out by the carload in bottles.

We got hold of the glassmen and we were surprised beyond measure to find we were not doing the lion's share of the trade. All of a sudden there was a big demand for honey. Two of them said they sold something like fifty carloads of small bottles for putting up honey. What is the result? Hones is going in homes, is going everywhere.

If you will go to New York city you will find scarcely a grocery store or drug store but what has somebody's brand of honey. If you go to Philadelphia you will find the same thing. If you go to Boston you will find the same thing; in Chicago the same thing. Ten years ago you would not find that condition. You would go to

grocer after grocer and find hardly any honey on sale anywhere. We find the housewife who used to buy a ten-cent jar now buying fifteen and twenty-five-cent jars. Then she says: "Haven't you got it in tin cans? Have you got it in 60-pound cans?" And what does that mean? That honey goes on the table every day. We have been developing a honey appetite.

A bee-keeper said: "I don't understand how Mr. Root pays eight cents for my honey and goes around afterwards and sells 9-ounce jars for fifteen cents."

If you stop and figure up how much a page in the Ladies' Home Journal and in Good Housekeeping costs, the cost of sending out traveling men, putting out window displays, showing honey at the various fairs, you will come to the couclusion that you will have to double on your money to cover advertising. So far on this advertising we have not been making money. What are we doing it for? We are doing it because we believe there is a future for selling honey.

We have competitors now. I talked to the advertising expert of the Ladies' Home Journal about a full page advertisement and he said to me: "Mr. Root, you will advertise other people; but you ought to court competitors. If you have strong competitors it will mean much for you."

That is true. I feel today that Gleanings is stronger for having a strong competitor like the American Bee Journal. It is better for the A. I. Root Company to have competitors around the country in bee supplies. It means that other men will sell more supplies. If we advertise rightly we will sell our own product and advertise the other fellow and the other fellow will advertise our product. You will advertise your honey and advertise the other fellow's product, but when you get your trade name established it will keep on selling.

Mr. Henry Ford is not advertising very much, is he? You will find the Overland is taking double pages in the Saturday Evening Post. They are trying to get their name in the minds of everybody who wants an automobile. You will notice that Willys-Knight is establishing its trade name for a special motor. Mr. Ford used to advertise quite extensively; he has established a trade name; his appropriation for advertising does not amount to over 2 per cent. He has got so well advertised he doesn't need to advertise. His machine advertises itself. We might take a little suggestion from that.

When you put out honey, put out a blend of three or four or five table honeys; keep that blend and color always uniform; then advertise and push it. If you have a trade name established, the public knows something about it and moderate advertising thereafter will keep it going.

It is not everyone who can go into the bottling business; it is not everyone who can make a carpenter. The qualities that make a honey producer are not necessarily the qualities that make a salesman.

The average bee-keeper, unless he knows how to sell goods and buy glassware cheap enough, had better sell his honey to the other fellow and get the best price he can for it.

President Baxter—Has any one any questions to ask of Mr. Root?

President Baxter—We will now adjourn the convention long enough to have the picture taken.

(After picture was taken.)

President Baxter—The first thing, before we take up anything further, I want to announce the obituary committee on the death of Col. Mills; on that committee I appoint C. P. Dadant, S. E. Prather, James A. Stone, all charter members, and well acquainted with Mr. Mills.

The next thing in order will be the Question Box.

The first question I have:

Is European Foul Brood generally as well scattered over the country as American?

Mr. Kildow will answer that.

Mr. Kildow—It is pretty hard to tell that; some localities you get into, one time are European, and the next, American, but I think as a rule there is more European than American; it is more widely scattered.

President Baxter—Any of the deputies answer that? Mr. Pyles, what is your observation?

Mr. Pyles—Mr. President, it is a hard matter for a deputy to tell; generally speaking, all over the state the deputy does not know.

President Baxter—As far as you have traveled?

Mr. Pyles—My work has been largely in European foul brood districts; I have found more European than American. There are some places where you do not find European but all American and some places where it is all European and no American.

President Baxter—Mr. Dadant, what can you tell us about your experience, in your correspondence in the American Bee Journal?

Mr. Dadant—Our own personal experience is it is both; however, I am of the opinion that the one is acquired; that is to say, in order to have American foul brood you have to get it from somewhere, while I believe European foul brood is epidemic; you have to fight it and get over it; it comes without being brought by any particular action on the part of the bee-keeper; that is the feeling I have; we are very much in the dark about this disease as yet. I think, with regard to the two, one is more contagious, the other more epidemic. As to our information through the Journal, we have not very much concerning these diseases within the last two or three years. I must say I kept bees forty odd years before I ever saw a case of foul brood. I saw the first case in Colorado, but in the last twelve years I have seen quite a good many cases; in the last two years we have seen none; one or two years.

President Baxter—Any other questions?

Mr. Williams—Mr. Chairman, right along that line I would like to ask a question: Last year I sent off and got what I considered a good queen; the swarm made me about 60 pounds of comb honey; this spring, when they were opened up I found some evidence of foul brood; I don't know whether it was American or European; it does not make any difference which it was, it was there. The swarm was strong. I didn't treat it; the swarm made me 120 pounds of honey this year, as nice comb honey as you ever saw, and when I got through I looked for foul brood and could not find any. What became of it?

Dr. Baxter—It was not foul brood.

Mr. Pyles—It was not foul brood, you did not have any foul brood. Evidently it was not European, if it was that bad that time in the spring.

Mr. Root—In our experience, we find there are a great many cases of sack brood, sometimes called European or American. The one distinctive feature is that the sack brood disappears while the European will continue as long as that queen is in the hive and may continue afterwards.

Mr. Williams—I know nothing about this business; I went by the American Bee Journal writer's theory, you must stick a tooothpick in and if it comes out ropy and brown it was foul brood; that is what I did; I have catarrh, I cannot tell about the odor.

Mr. Root—It will come back next year if it is American.

Mr. Dadant—Years ago I learned a description of American foul brood from James A. Green; I think it was the best description I have ever heard. There are three symptoms: That ropy condition, stringing out 1½ inch out of the cell; the brown, coffee color of the rotten brood; and glue pot smell. If you can't smell it yourself, get somebody else; tht three must be together; then you have American foul brood.

I don't think it has ever failed. James A. Green described that thirty years ago I think. I thought it was the most positive description; those three symptoms. You can have other symptoms that accompany it, but if those three are not present you are not sure it is American foul brood. They are not all three in European. There is a little ropiness, sometimes. In sack brood the larva is as in a sack; you can lift it out with a toothpick, watery inside; when it gets dry it can be shaken out. With American foul brood, you have to shake the cells down to get it out.

Mr. Root—It has been our experience, that American foul brood will disappear after a fine honey flow, and come back again six months afterward or next spring. If you had several cells of comb with that ropy condition I would be inclined to think you had American foul brood and, if I am not mistaken, you will have it come back.

Mr. Heinzel—I have known American foul brood to disappear that had four out of five cells; often one out

of five I don't think it would disappear; I have had a good deal of experience along that line, inspecting. I have had European disappear.

I have treated yards that were very bad; and have come back later, after the honey flow, and found it would disappear.

Mr. Pyles—A year ago this last September, in Mr. Dadant's yard—we found one peculiar colony; it had every symptom of European foul brood; it was not European foul brood—and it is very possible that some of these cases where they disappear, that they were something of that character.

If a man's nose is really good, he will always be able to tell European foul brood. There is no question about it.

And, if his nose is at fault, perhaps his vision is also.

One peculiar thing about American foul brood that is especially called attention to is its ropy stage.

The dead larvel bee is ropy, so that, if you insert a toothpick and slowly withdraw it, this dead larva will draw out very much like glue.

With European foul brood it is another thing, it strings out a little when you find the European foul brood condition. If an Inspector is good he will be able to tell the contagious from the uncontagious disease.

Question: What is the best way to prevent bees drifting in the apiary?

President Baxter—Who has had some experience?

Mr. Root—That word drifting means colonies of bees closely situated that will intermingle more or less. Young bees are very apt to follow where the strongest flyers are.

Mr. Kildow—I never had drifting except once. I have an idea the man means spring drifting when first taken from the cellar. I wintered bees in the cellar for twenty-five or thirty years, I guess; I never had drifting only in the spring. My colonies are about six or eight feet apart, but there came a little northwest wind and I think when I took them out that morning they were pretty well riled up. The wind drifted in that corner of the yard and two or three hives there got the bulk of the bees. When I took the bees out in the evening and let them settle before morning I didn't have any drifting.

To overcome that a man better set his bees out—part of them at least—to give them until morning to cool down in and then the bees will not all go out at once.

President Baxter—I believe that all hives drift. When the young bees fly out from the hive there are always a few who make a mistake, especially where you have hives in a row. Young bees are likely to make a mistake and go in the wrong hive.

I read in a journal recently that Italian bees were apt to leave their home and go to another colony. I think he would have found black bees among those Italians also. If you have the Italian bees they will be noticed more readily on account of their bright color. I believe in all colonies there is drifting at times.

I believe the main remedy is not to have your hives in such fine, straight, regular order, without anything to tell them apart; that is to say, the bees ought to have some trees or shrubbery or two or three hives in a bunch, then there is not so much chance for the bees to make a mistake; but to have the hives in a regular row, and the same distance apart, you will have some drifting and there is more of a chance to lose queens.

Mr. Stone—I don't believe that you can fool bees that easily.

Mr. Dadant—Young bees, yes.

Mr. Stone—If old bees can tell their place so well, why don't young bees, also? Why don't they learn their place the first time they fly out?

When I began bee-keeping I painted my hives all colors. One year I made an experiment, to weigh how much honey they got each day. In changing that hive I raised it 4 inches. For half a day there was a bunch of bees could not find their place; would light on the board the scales were on, as it was where the alighting board of the hive had been.

Mr. Kildow—I don't take stock in drifting only in the spring-time, when they are first set out.

A neighbor above me six miles has an apiary of 240 or 250 colonies. If you can tell which colony of that apiary has the most bees, I would like to see it. They are set in regular rows, five or six feet apart; everything is in regular order as can be, and you can't

tell but what every hive has got the same number of bees in. But in the spring, when the bees are first set out, and the wind is in a certain quarter, you may get some drifting.

Mr. Dadant—Mr. Kildow is right when he says that the dangerous drifting comes in the first spring; that is the time it hurts the worst; after a while it does not make any difference whether there are a few more bees in one hive than another. How to prevent it, is another proposition entirely; and a pretty hard one.

President Baxter—Anything further? I don't know about this drifting business. I will concede Mr. Dadant is right to a certain extent; that is to say, there may be a little drifting during the whole season, after the young bees begin to fly, but not drifting to the extent of being injurious to any one hive.

I have had my bees in regular rows, as straight and nice as could be, six feet apart from center to center of entrance. My hives are painted different colors. I never notice any drifting to any extent, not to an injurious extent, to other hives.

I manipulate my hives so often I know just what is going on; if the queens were all of the same capacity, I would know that, too. There has never been, in my experience, drifting in the last three or four years, to be injurious to any of the hives.

Mr. Dadant—I didn't mean to say the drifting was injurious. I knew of only one kind of drifting that was injurious, that was in taking bees out of the cellar. We overcame that by placing the hives back in the same place.

Dr. Miller says it makes no difference where you put your colonies back in the spring after taking them out of the cellar.

We have in our apiary two kinds of hives, American frame, 12 by 12 on one side, and the Quimby, 11¼ by 18 on the other side. In hiving some swarms one year, we had hived some in the other kind of hives that belonged to the other side, and vice versa. We had American hives on the Quimby side and the Quimby hives on the American side, and we decided when we took them out of the winter cellar quarters it would be a good time to place them back where they should be, on the same side of the other colonies of the same shape.

In the morning we took them out of the cellar, and some of the bees acted queerly; it was the bees of those colonies that had been changed; they were looking for their hives. I am satisfied they remembered the location.

If you put your bees in the cellar indiscriminately, and put them back haphazard, you will have drifting. That is why I say it can cause drifting. Your bees are bewildered; they are not where they were last fall. Of course, the more they are mixed up the more drifting there is.

When you put your bees in the cellar, mark the spot in the fall, and mark the spot on which the hives stood, and you will avoid drifting.

President Baxter—What has your experience been, to take them late in the afternoon?

Mr. Dadant—That would make no difference.

Mr. Coppin—I find Mr. Dadant's theory is right in regard to bees remembering their place when they come out of the cellar in the spring.

I have been in the habit of wintering bees in the cellar a long time. Mr. Dadant says to keep track of where you take the bees from in the fall and where you put them in the spring, and put them in the same place.

I have tried to do that, but, when it comes to taking out 100 or 150, I could never tell just where they belonged.

Mr. Dadant—Have a number upon them; have a roof on the stand and put the number under the roof with chalk, and when we take them out they are taken in order, anyway, after you get started. It is like taking a lot of chairs out of a room.

Mr. Coppin—I have been taking them out of the cellar and putting them on stands, and before I would get half way through I would notice in another part of the bee yard a bunch of bees gathered, and would have to put hives there to catch those bees. It was evident the bees in the fall know their place, and when they came out in the spring I would have to keep filling in the spaces.

President Baxter—It would be much better to take the number of the hive and locate where they belong.

Mr. Coppin—The bees didn't appear to fly, and then, when it comes to drifting, you can't tell exactly about that; sometimes we would bring out a hive and we might find there were bees in it but not know how many.

We set them down in their place; they get excited and go to flying. If you put out 150 at one time there is quite an excitement all at once. Finally by evening you would find some hives empty of bees altogether. There were bees in them when brought out, but probably very weak, and they had joined others.

Mr. Kildow—There is where doctors disagree; maybe that is locality, though. Up to a very few years ago I wintered in the cellar. It made no difference to me where I set the colony of bees when I brought them out in the spring. I never had any drifting except the one time of which I spoke.

In the fall of the year, when the bees quit flying, if I want to move a colony, I do it, and I expect them to stay where I put them.

President Baxter—I have done that, but they go back to where they used to be.

Mr. Kildow—I would trade those bees off.

Mr. Root—My experience has been along the line of Mr. Kildow's. Mr. Dadant has had some experience along that line.

Do you trundle your bees on a wheelbarrow when you move them out?

Mr. Dadant—No

Mr. Root—We trundle all we can. The idea is like drumming on the hive; we blow a little smoke in the entrance and put it on a wheelbarrow or cart, and the more we can jar them so that they are somewhat demoralized, when they come out they begin to mark things if we have changed things.

If you carry the bees out you would have what you describe.

I have talked to Dr. Miller about this matter of putting the bees out. I have watched it closely; we always use a wheelbarroow to shake them up, we do it purposely.

I began to associate the idea if they stayed in winter quarters for three or four months in the cellar when they were put out in the spring they did not know where they belonged and they would stay where they were put.

Mr. Kildow—I don't shake them. I pick them up in my arms and carry them as still as I can.

Mr. Dadant—I have quit wintering in the cellar for 15 years because we have so many mild winters, but when we put our bees in the cellar we give them plenty of ventilation. There was just a cloth between each hive.

Another objection I have: We move them when we think it is going to be a nice day; sometimes it doesn't turn out to be nice. I don't want them to be disturbed so much.

If they are in the spot where they were in the fall before, the old bees will remember the spot and will not bewilder the young bees.

If you have a large number of bees come out at once and some of them remember their location and are not on their location they are going to drift.

If you have your bees come in large numbers out of the hive—like the young bees when they first fly—they are all glad to take flight and come out, hundreds of them at one time.

If the old bees don't find themselves on the spot they occupied in the fall, they are going to take some of the young bees with them and you will have more drifting than if you put them on the same spot.

Mr. Stone—If there is no question that has been read on this, I would like to ask the question:

There has been so much said in Gleanings lately about the use of carbolic acid, I would like to ask if any of the members here have ever tried any of the things that were tried there?

One man that used carbolic acid said his bees got to robbing. He heard a sound early in the morning and went out and examined things; he could not understand or imagine what he had better do; he made up his mind finally that he would hunt up the hive that the robbers were coming from; he didn't seem to have any consideration for the hive that they were robbing.

He found this hive and he smeared the landing place with carbolic acid and in a couple of hours he went back and repeated the operation.

By noon everything was quiet and he said that ended the robbing. Did any one else read that?

Did any one else try it, to see whether it would work?

Question—What is the cost of a pound of wax to the bees?

President Baxter—Mr. Root, will you tell us?

Mr. Root—I don't know; I can give you my opinion; it is not scientific.

I should say between six and seven pounds, as a mere guess, based on what others have said.

President Baxter—Can you cite us any authority for that, by experiments made?

Mr. Root—Experiments were made by Velon, back in the early days, in which, as I remember it, it was between 4 and 5 pounds of honey. He found a difference between honey and sugar syrup. The old dictum was 20 lbs. of honey or syrup to the pound of wax (that is Huber's); that was accepted up to the time of Velon. Then there were later experiments made by different ones; all of them seemed to confirm Velon's work along between 6 and 7 lbs.

Mr. Williams—Mr. Chairman, I would like to ask Mr. Root another question:

Does not that depend altogether on the flow of the honey as to how much honey it will take to make a pound of wax?

President Baxter—Why should it?

Mr. Williams—I think the secretion is more at one time than at others; when there is more honey it produces more wax, more heat.

President Baxter—More wax to the pound, you don't mean?

Mr. Williams—I think so; for instance: The body of a person requires more moisture at one time than at another. Why? The secretion is not any more.

Mr. Stone—Is it not very natural that bees are like people? When we are laboring, we eat and consume more food than when we are doing nothing. Would not that be the case with the bees, that they consume more honey and, therefore, secrete more wax when they are working?

President Baxter—That is off the question.

The question is: Hom many pounds of honey does it take to produce a pound of wax? It cannot take more pounds of honey at one time than another. It always takes twelve to make a dozen.

Mr. Dadant—Of course, I have an opinion on that subject, and that is, it differs according to the conditions in which the bees find themselves. I don't believe it ever is as low as seven pounds nor as high as twenty, and I think a great many experimenters have fooled themselves. When you harvest a swarm of bees you may figure how much honey they have in their stomachs but you don't figure how much wax they have stored in their pockets.

I asked the question wherever I went, in Europe, in Texas, in the East, in California and in Canada, and had the greatest number of answers, the majority were around. 10 and 15 pounds.

I do believe it cost at least ten pounds of honey.

I would like to have the opinion of the members.

Mr. Pyles—Mr. Ellison states a colony of bees must be fed to do good work; he fed his bees at all times.

In my judgment it all depends upon conditions; if a colony of bees are in good condition it does not take nearly as much to produce a pound of wax as if that colony was in a poor state.

They must be in first class working condition. You take a horse that is in a poor condition—it takes a long time to get that horse in good working condition, or a cow that is in poor condition, to give milk; consequently it is the same with bees, but after the bees are in good condition it does not take so much honey to produce a pound of wax.

President Baxter—In the first place, when the colony is weak and poor, some of that honey doesn't go to wax, it goes to keeping up the vitality of the bee.

The question is not: How much honey will it cost to produce a pound of wax—The qusetion was—How much does it cost the bees?

The person who asked this question wants to know what it cost in stores of honey to produce a pound of comb.

Mr. Dadant—I thought I said I was the one who asked the question.

I think the more we duscuss it the more light we will shed upon it.

What does it cost in honey?

When we feed the bees so that they are fat—I would say that is not the cost; that is to be considered as a part of the cost. The trouble is people feed their bees until they have all the honey they can carry and then they begin to feed them to make comb.

The question is—how much honey will the bees store if they don't have to build comb?

Mr. Williams—I see the Chairman's standpoint is this:

He wants to know how much absolute honey converted into wax will it take to make a pound?

Nobody can tell that because you can't tell that all the honey has been used for the purpose of making wax. There is no time in the bee's life that you can tell what he is eating honey for. It may be for producing wax—for producing flight, for one thing and for another; there is no way you can get at it.

Brother Dadant wants to leave the impression with us, which is right, that it is cheaper for us to buy foundation and put in our hives than it is for the bees to make wax and put in there.

Dr. Baxter—I think he is right at that.

President Baxter—We know that already.

Mr. Root—That question came to me and Mr. Dadant asked the question. I have a question I was going to slide in the Question Box.

President Baxter—Present it.

Mr. Root—Before I put the question I want to state the circumstances. It is a hard question.

A customer of ours bought some of our foundation and he said it was not good.

I asked him what was the matter. He said the bees filled out the sections and filled only one side and not the other. He said to me—"Your foundation is no good; some of the bees only build the section on one side."

I went around and investigated and found some of his neighbors who had bought other foundation had had the same experience. Then I said: "I am up against it; I cannot tell the reason, but I feel better about it." To think that Dadant's and the other foundations were acting the same and that they were up against the same proposition. But I didn't know the answer.

Dr. Baxter had a similar experience: I would like to have Mr. Dadant answer the question—why bees will sometimes fill out sections on one side and not touch the other; fill it out and cap it over, and the section looked perfect—turn it around and there is nothing but the foundation.

Mr. Dadant—I cannot answer that.

Question—What is the cause of the bees filling one side of a section with honey and not touching the other?

Mr. Dadant—I acknowledge I don't know. I want to ask a question:

Was that the last section to be filled or was there one section beyond it, and did they fil that space between that section and the next. If that section was the last section in the box, my explanation is the bees went that far and no farther, and if they had wanted to build some more they would have built on the other side of sections.

If they built out to the middle of that one, I cannot explain it. It would be necessary to know the particulars.

Mr. Root—Some on the outside, very often in the center; half a dozen on one side and not on the other.

Mr. Dadant—In that one section there would be some sort of material on the face of the wax that would disgust the bees.

Dr. Baxter—I had a super that had three sections; it happened in two different colonies; they were drawn out perfectly on one side, on the opposite side there was nothing but foundation.

Some time or other the foundation on that side of it had been exposed to the light, probably dust settled on it; the other side had been next to the paper in the package.

Mr. Coppin—I have been in the same fix; I have had probably hundreds of sections filled on one side and nothing on the other. Of course there would be a space between the separator and the foundation, nothing there.

Maybe something had got on it the bees didn't like—dust or something, I am not prepared to say.

My section being so narrow—it is only 1¼ inch thick—I thought probably it was on account of there not being space enough. But I find others

are getting the same results, so I will have to get away from that theory.

Mr. Kildow—This summer we had a stoppage in the honey flow. Some cases only got fairly started in the center of the section; they only worked one side; later on they filled the case up.

Question—Will carbolic acid spread on the landing board of a hive that is doing the robbing, stop it?

Mr. Root—I should say it may stop things temporarily, but what stops robbing also drives back the guards. I would say, let carbolic acid alone when dealing with robbing.

Find out where the robbing is, and put a cage over them.

I have found that carbolic acid aggravates the trouble.

Mr. Coppin—I tried carbolic acid twenty years ago, and gave it up for not being very good.

I used to take corn cobs, when I had a case of robbing, and put a little carbolic acid on the corn cob and put it at the entrance of the hive.

The robbers would stoop just before they struck the corn cob and not go any farther, but I have had it so that I thought all the bees in the hive were dead, but they finally recovered.

I don't like to use it on that account.

Mr. Stone—Do you put the carbolic acid at the entrance of the hives doing the robbing?

Mr. Coppin—Yes.

Mr. Pyles—My impression is, if you put it sufficiently strong on the landing board of the hive doing the robbing, it will stop the robbing

Mr. Root—I applied the remedy to the hive that was being robbed.

Mr. Pyles—You fellows have been treating the wrong horse.

Mr. Dadant—The effect of that carbolic acid would be to give those bees a peculiar smell that would make the other bees fight them more readily.

Is that the purpose of the carbolic acid?

Mr. Stone—In decapping for extracting, is it desirable to save the comb or get what wax you can?

President Baxter — Somebody who does a great deal of extracting might answer that question. I guess it lies between Mr. Dadant and Mr. Root to answer that.

Mr. Root—I would like the President's answer.

President Baxter—It all depends upon the thickness of your combs. If the combs are fairly thick, say two inches or two and one-half inches, just slide the capping off, provided they are smooth. If they are thicker than that, three or more inches, cut them down. I only use nine combs in seventeen inch space.

Mr. Stone—Is that a ten-inch frame hive?

President Baxter—Eleven inch frame hive. I had good combs of extracted that way, and I get results from the combs. I like to have combs that are about that thick, and keep them that way as much as possible.

I have combs I have been using for thirty-five or forty years; those combs get pretty thick.

I have had them so that eight frames were all you could get in a box of that width, and I tell you some of those frames would produce honey, too.

Mr. Withrow—I don't depend upon which would be the best, unless we could find out about the production of wax. It would depend upon which you liked the best. I like to cut them down pretty thin, then I have wax to send away to make foundation out of.

Question—Does the Illinois State Bee-Keepers' Association average in efficiency with other State associations?

President Baxter—We will ask Mr. Root that. He has visited a great many associations.

Mr. Root — I really don't know as I would know what is meant by efficiency.

Work accomplished and done, I presume. I should think the Illinois association, for the number of membership, is accomplishing as much, when you come to consider what other associations are doing, and a good deal more.

The only organization that I could compare with it at all would be the Ontario Bee-Keepers' Association, and they have a regular grant of $500. Their membership is larger. I think between six and seven hundred, and they are doing a great deal for bee culture in their state.

They also have an agricultural college in connection with it, and an

apicultural school in connection with the agricultural college.

I think it is hard to make comparisons; it is like a woman with her children—each one is prettier and each one is better.

Question—What is the proper care of comb honey after removed from the hive in midsummer until marketed?

President Baxter—Mr. Coppin, will you answer that?

Mr Coppin—When the coomb honey is finished, capped, I like to take it off as quickly as possible and place it in a room where there is plenty of ventilation; place it in building with the sum shining in—not in the shade with a lot of shrubbery and trees to keep the sun away.

I have kept a lot of honey that way—place it on shelves; place the sections not close together but what the air could get between them, protected from the dust; have the windows open, so the draft could get through; have the windows screened, and the temperature has been very warm—too warm to work in—you could not stay in there to work.

My idea that is the best place to put your comb honey and care for it until it is marketed; keep the room dry and warm.

President Baxter—Would you consider it essentially necessary to have that much heat?

Mr. Coppin—It does not hurt it. Those cells that are unsealed around the edges next the wood, if it is kept in a warm room that way it comes thick; if the sections were turned the wrong side up it won't run out.

I think it benefits the honey to keep it in a good warm room. The moth has got to be looked after, because, being so warm, the moth is liable to be there. The place needs fumigating occasionally to keep the moth away. I fumigate with sulphur.

Mr. Root—We were on the market for comb honey last year, and we thought the crop was going to be light.

Most of the comb honey, a good big part of it, was harvested after the first of August. We laid in a supply, as we supposed, sufficient to carry us over the season. When honey came in afterwards we bought more and kept on buying until I was scared.

We had 100,000 pounds of comb honey, and then the sale for it dropped square off, about the first of January, as it always does about that time.

This is what we did:

We knew it was an absolute case of not making any failure. Most of it had been brought in during November, and was put in a temperature of about 85 degrees. Practically all of that honey was sold the following March, April, May and June.

That honey was kept in a temperature of from 80 to 85 degrees and did not granulate.

We had some honey that had been placed in our warehouses in the east and west, where it had been placed about four inches from the floor, and it was granulated on the top and bottom. Why?

We discovered there were drafts of air going across the top and bottom, but in the center it was not affected by that temperature.

I am satisfiied, with comb honey, that it is just as Mr. Coppin has stated: If kept in a warm room as soon as it gets off the hive, and kept there at a temperature of from 80 to 85 degrees for three or four months, there will be no granulation afterward, no matter what the temperature.

We took some test cases of honey that had been in the warm room about three months, and placed them indoors during the day, and at night out of doors, alternately handling back and forth.

We know the cause of granulation is a cold and warm atmosphere—but this honey that we tested in this way did not granulate, after being kept at that temperature for about three months.

Honey granulated in two or three weeks that had not had that temperature previously.

There is a large amount of comb honey being produced and the result is a good deal of it is going to be kept over by the beek-keepers all over the country.

If the bee-keepers will put this honey in a temperature where there are no drafts and keep it in an 80-degree temperature, as nearly as possible, and they will keep that honey until it is sold, in March and April, it will not granulate.

This is very important if you wish to keep the honey from granulating.

I believe I am giving the bee-keepers right here a trick of the trade, if they do not already know it

Keep the honey in a warm room for three or four months after it has been taken from the hive and it will not granulate. The change of temperature is what hurts.

Those of you who have carried honey over, hold it in a warm room and keep the temperature uniform. It ought to be steam heat or gas heat of anthracite coal.

At our Medinah warehouse that temperature was kept at a point where it hardly varied any. We had two watchmen, night and day.

If that honey granulates, we cannot get more than seven or eight cents a pound.

We have learned, too, there is a special trade in New York that will take granulated honey, and that is the Jews.

They will take that, and why? They want to use it for their sacrificial purposes. They must have a certain amount of honey and a certain amount of comb. By melting up that granulated honey they can get just what they want.

Mr. Coppin—Mr. Root, does it not make any difference in regard to what the honey is gathered from in the way of granulating?

Mr. Root—All the difference in the world.

Mr. Coppin—I found that the alfalfa honey will granulate while the Illinois white clover honey won't.

Mr. Root—You can stop alfalfa if you will treat it.

Mr. Coppin—I have kept a case of alfalfa honey in the same room with our white clover honey—the white clover honey kept clear, while the alfalfa granulated, kept in the same place.

Pres. Baxter—Are there any other remarks on the subject?

Question—In removing supers from the hive, will a cloth saturated in diluted carbolic acid, spread over the frame, drive the bees down out of the super?

President Baxter—Get bee escapes is a much better way.

Mr. Kildow—I do not know how strong it has to be. I tried it this fall, but I did not succeed. I do not know whether I got it strong enough or not. I do not think I drove the bees over an inch; they got over the rack and that is all.

Dr. Baxter—I tried it. The first time I did not have any success. I made it stronger the next time—they were all out of the hive.

Mr. Pyles—Evidently that answers the question—it will do it.

Mr. Pyles—It has to be a certain solution.

Mr. Stone—J. A. Green gave that in Gleanings. He said dilute it; make a 10 per cent solution to saturate your cloth in.

He said when he went into his yard with his motor truck, within fifteen minutes he was ready to load his honey on to the truck and take it to the yard to extract it. He said, smoke them to start them to moving. (If escapes are used, you have to make a trip the day before, to place them.)

Don't leave it on too long or it might flavor the honey.

When I tried it I thought I would give the bees a little time to get down; they were a little dull; it was when the nights were a little cold.

I put them on between 11 and 12 o'clock; I thought they would be ready after dinner anyway.

It must have been 2 o'clock before I got out to examine, and they were all out.

I didn't have a bit of trouble, and I thought it worked fine.

The bees, instead of running where that carbolic acid scent is, all run down.

For the benefit of bee-keepers, I want to tell you something else:

I had some hives that were so heavy I did not know how to manage them. We had in our corn crib a block and tackle to raise machinery up into the loft. I conceived the idea of taking that block and tackle and making a temporary derrick of it.

I took three pieces, 2x4 white pine 12 feet long, bolted together at one end—little blocks between so they can be spread at the other end—and you have a derrick that is easily moved.

Then I had a ring up there to hook the block and tackle into and it is the nicest thing I have tried. When I

think I have got honey to lift, I have a way of doing it without that heavy work. My hives are standing on concrete foundations, and are easily gotten at with the derrick.

Mr. Dadant—I have a resolution to offer.

Here is the resolution drawn by the committee:

RESOLUTION.

Resolved: In view of the fact that the late Colonel Charles F. Mills was one of the incorporators of our Association, and that he helped us to organize and secure recognition by the Legislature of the State of Illinois;

Therefore be it resolved: That the Illinois State Bee-Keepers' Association in the death of Colonel Charles F. Mills has lost a true friend and active helper.

That, to keep his memory fresh in the minds of all our members, a copy of these resolutions be spread upon our records. That another copy be sent by the Secretary to the members of his family.

C. P. DADANT.
S. E. PRATHER.
JAMES A. STONE.

President Baxter—You have heard this resolution; what is your pleasure?

Motion made and seconded, carried, that it be unanimously adopted.

Question—Has anything been found out as to the cause of that peculiar case found at the Dadant yard last year?

Mr. Pyles—There was found in the Dadant yard last year a peculiar case, and you remember Gleanings reported a case that was not American or European foul brood.

Mr. Dadant—I didn't see the case; it was mentioned to me.

Mr. Root—I remember very distinctly a bunch of men standing around the field day, in Mr. Dadant's yard, and one of the men said: "We have found a case just like it." He said: "You remember you reported in the Journal of having found a case of drawn brood in a hive that stunk so badly the boys thought it was foul brood?"

I went out in the yard, and it looked like it. As soon as we saw it, all drawn brood, we knew it was nothing but drawn brood that the bees had neglected and the bes had died for want of care.

At Dadan'ts yard it was simply dead drawn brood.

I might say in this connection, one of the most deceptive things is a lot of dead bees in front of the entrance to the hive.

If a little damp, those dead bees will give an odor like foul brood.

If I go out into the yard and notice that something smells wrong, I say: "See if you can find dead bees."

Mr. Kildow—I did not notice any smell about this at Dadant's.

President Baxter—When you come up to my apiary I will show you a hive of the same kind.

Mr. Dadant—The fact of the matter is that, although it was in our yard, I heard of it at the time, but we were busy that day. I was told it was not important, and it must have been unimportant because I didn't hear of it again.

President Baxter—I had a case like that this summer. I was going to treat it, but I did not, and when I came back I found that conditions were all right, normal.

President Baxter—Shall we have an evening session or not?

Mr. Root—There is a matter I think you would be interested in, if it is proper to speak of it at this time.

Mr. Pellet and myself were appointed on a committee, a committee of two, to go to Washington to see what we could do about getting a special appropriation for extension work from the national government.

Mr. Pellet went down and I followed him.

The result of our efforts: We secured $5,000, which money is being used in extension work in the southern states. There are three men in the field—Tennessee, South Carolina and Virginia. They are paid out of the joint fund from this appropriation of $5,000, and also funds from the state.

When I went before the agricultural committee I apparently did not succeed in getting anything.

It is so necessary, in getting an appropriation, to have a resolution from the state and national organizations.

They will not listen to a resolution

made by a supply dealer or a bee journal editor.

The chairman of the committee would not listen to me; I could not get his hearing.

I had letters from the Secretary of Agriculture, and senators, introducing me to the man who had the matter in charge.

I waited there four days, and I made up my mind that, if there was any way of breaking through governmental affairs, I was going to do it.

Having seen all of the members of the agricultural committee except Mr. Lever, I stood outside of Mr. Lever's office and waited, and I said, "If any one can get in there, I will."

I knocked at the door several times, but I did not have the combination.

Pretty soon a girl came to the door. She gave two knocks, and then, when she was let in, I lock-stepped in with her.

The clerk said to me, "How did you get in here?"

"I walked in."

He said to the stenographer, "Did you let him in?"

"Well," he said to me, "Mr. Lever is very busy. He can't see you today."

I said to him, "I have a very important matter in which Mr. Lever is interested; I must see him."

He wanted to know who I was.

I told him I was the representative of the National Bee-Keepers' Association and several of the state associations, and wanted to ask for certain extension of funds in which Mr. Lever is very much interested.

Mr. Lever was the author of the bill which is now a law, making it possible for extension workers to go over the state and instruct farmers how to carry on agriculture.

I said to the clerk, "You tell Mr. Lever that Mr. Root is out here as a representative of the National Bee-Keepers' Association and wants to see him."

He went in there, and finally said to me, "You can go in and see him."

I said to Mr. Lever, "I have a matter in which you are very much interested."

I told him how this law of his might be extended if we could have $5,000 for the bee-keepers, and the result was I stayed with him thirty minutes.

He stated to me that we could have an appropriation of $50,000 next time.

Now, what I want you to do is to have things in such shape — have somebody appointed a committee to go down and ask for that $50,000 that has been promised us.

I wish to make this suggestion:

That your resolution committee draft a suitable resolution, that this organization particularly ask for this $50,000 appropriation. And why?

For this reason: If the government will grant this $50,000, you will get part of it in this state.

Just to imagine having an apicultural instructor to go around and instruct the people not to have foul brood and to know what it is when it comes.

Several of the men have gone down to South Carolina, Virginia and Tennessee, to give them instructions. In this way we can do away with bee diseases.

I merely suggest that this organization prepare a resolution and have it properly submitted, so that when Mr, Pellet and members of the committee go down to Washington they will have the proper credentials from the state organizations.

President Baxter—Mr, Root, that is for a very good purpose. Do these extension workers work individually or at Farmers' Institutes or how is it done?

Mr. Root—The extension worker I think would be a co-laborer with Mr. Kildow.

The plan is, so far as I know, that these men will go out in the country where they need instructions. They will be told how to keep bees, how to get rid of bee diseases if they have any; how to keep their hives clean—and tell them of the modern methods.

They will be told how they can put their honey up in such and such a way.

This will bring up the quality of bee-keeping and the quality of the product.

President Baxter—I think, and I have always thought, the best way to reach the masses would be through the Farmers' Institute.

I took that matter up with the late Secretary of the State Farmers' Institute, Mr, McKeene, and he had prom-

ised to begin that this winter in the Farmers' Institute.

If we could have the right kind of men follow up, with the help of the Farmers' Institute, we could develop a wonderful interest in bee-keeping and also lay the foundation for sufficient appropriations to do the work we want to do.

Mr. Root—These men work with the organizations of the state.

You have a man right here, that I think would be worth a dozen men that go down to Washington—Dr. Baxter.

President Baxter—Gentlemen, you have heard the suggestion of Mr. Root, and I would suggest you entertain a motion that the Committee on Resolutions be instructed to draw up a resolution in accordance with the suggestion of Mr. Root.

Mr. Stone—I make a motion that the Committee on Resolutions be instructed to draw up a resolution in accordance with Mr. Root's suggestion.

Motion seconded and carried.

President Baxter—What is your further pleasure?

Mr. Pyles—If it is decided to have an evening session, I would suggest that we adjourn until seven-thirty o'clock.

President Baxter—There are one or two questions here:

Question—Is it advisable to re-queen at the end of the honey flow?

President Baxter—Who will answer that question?

Mr. Root—I find that our colonies that winter best are those that are headed by young queens. A young queen will ay eggs in the months of August and September or later, where an old queen will stop at that time; that means that the colony is headed by young bees.

We took 400 colonies to Appalache, Florida; we thought we would keep those colonies breeding right along. We found that in every case where the queens had done full service that summer by fall they would not breed.

If one can afford it he could buy queens, but I say that a large honey producer can raise his queens if he is on to his job.

If I were a large producer, you can count on the fact I would raise my own queens but I would re-queen every fall except those that have had a good record.

I am in favor of keeping a queen if she is good at least two years; if she is not, I favor destroying her as soon as possible and replacing her.

Mr. Howse, of New York, who is a practical bee-keeper, says that he re-queens every summer, late in the summer. The reason he wants to re-queen late in the summer, he wants the queen to be at the height of her prolificacy the following spring. He wants to have his queens raised late in the summer for good breeders; young queens in the following spring, and replace them in the fall.

It goes personally against the grain with me to kill a good queen that is only a year old, but if she is worthless or of no value I want to destroy her and replace her as soon as I can.

Mr. Coppin—It makes a lot of work for the bee-keeper, if he has two or three hundred colonies of bees, to know the age of each queen and to replace them, and unless he knows he is going to get some benefit from doing it he is apt to neglect it.

Mr. Pyles—It is evident this matter can be thrashed out satisfactorily to each individual bee-keeper. All you have to do is to try it along these lines. You can demonstrate it. I believe it would pay to re-queen. I have noticed that my young queens winter better and go into work better next spring than those two years or more old.

It looks as though it would be a criminal waste to kill a good queen.

The question about the age of a queen—I have seen queens old and almost helpless at three weeks old; have seen tested breeders good at three years old after I bought them; it depends on the individual queen.

Mr. Coppin—How do you keep a record and know the age of the queen?

Mr. Pyles—I do my work like the President; he manipulates and he knows the condition of the hive; during the busy season of the year I venture to say if there was a case of superseding, or attempted swarming, I would know.

President Baxter—I would say I woould in no instance supersede a queen as long as she is doing satisfactory work. Some of the best queens I have are two and three years old.

In my home apiary this year, when

I extracted, it was the first of October. I examined every hive when I put on the bee escapes, to see if they had sufficient stores below for winter and in what condition; set my division board over where I wanted it to remain during the winter, and put my frames that I wanted to take out on the other sde the division board, but I found only one colony in the whole apiary that did not have enough honey for winter stores, because every frame from one side to the other was full of brood, and that was a queen from 1914.

What was the result? I could not take those frames out and kill the brood. I had to watch the colony, and as soon as the brood was hatched I took out every frame and gave them frames of honey.

There was a queen two years old that bred better than any queen on the place.

I have had queens only a couple months old I had to supersede, and so I believe, and my policy has always been to watch the work of my queen and pay no attention to her age, but as to her work and the results, and in that way I have gotten good results from my colonies.

EVENING SESSION.

Convention convened at 8 o'clock, in the Sun Parlor of the Leland Hotel.

President Baxter—If it is the wish of the Association tonight that we continue our session, we will listen to Mr. Wiley.

Mr. Wiley—I have been interested in forming an association in our part of the state. I did not know just how to go about it; I did not know whether we should join this Association or form one of our own.

President Baxter—Form one of your own and affiliate with this Association.

Mr. Wiley—That is my opinion. I thought it would be better on account of the distance up here and the expense attached to coming to Springfield and attending one of these conventions.

I could get them to come together there as it would be closer, where I could not get them to come up here.

If I can have the help of this Association, I can form an association to affiliate with this Association, and it may do some good down there.

I went down there five years ago. There had not been anything done toward cleaning up foul brood.

I took up the work with Mr. Kildow. He gave me the help I asked for. We have got it in my neighborhood pretty well cleaned up. This fall there were three cases of European, one of American, so we have had something like fifty cases the last three years. I think that is a pretty good start.

President Baxter — Where is your home?

Mr. Wiley—Wabash County. So far we know there is only one man down there who has ever belonged to an association or reads anything about bee culture or anything. I want to get the people to reading. It seems that they do not take any of the literature. I have offered several inducements to my near neighbors, offering to loan them books and publications.

I have offered them, but they don't seem to want to read.

It is pretty hard for one fellow to jump into that kind of a country and do much, and it is going to take some other strength besides my own.

In the inspection work I found some people who don't say anything; others say you can go through my apiary if you want to; others are looking for you to come in and tear things up and go away and leave it.

Like everywhere else, I believe if a stranger would come in our neighborhood, he could do more than one who lives close by.

I want to solicit the help of this Association to get more people interested down there.

President Baxter—I would suggest doing that. Do you not have any Farmers' Institutes down there?

Mr. Wiley—We have Farmers' Institutes, yes.

President Baxter—That would be the best way to get them interested, by having the speaker at those institutes talk to them and endeavor to get them interested.

Mr. Wiley—We had one there two weks ago; nothing was brought up about bees at all.

The Secretary of the Farmers' Institute has got some bees, and Mr. Stone told me he thought he got his appli-

cation for membership in this Association last week.

Outside of him there is nobody I know.

Mr. Stone—If you and he get together in the Farmers' Institute, and afterwards call the men together whom you thought would join this Association or affiliate with us—and tell them what they would get by sending their dollar to us, I believe you would be able to work up a considerable interest.

President Baxter—Do you have many bees in that country?

Mr. Wiley—We have something like 200 altogether, around five miles square.

President Baxter—Are there many bee-keepers? How are the flowers for honey?

Mr. Wiley—Pretty good this year; I got 300 pounds surplus out of nineteen hives.

President Baxter—What is your main source of honey?

Mr. Wiley—White clover, spring time; we have been having sweet clover in the fall, golden rod and Spanish needle.

President Baxter—Smartweed, too?

Mr. Wiley—Yes, plenty of that. Smartweed? The bees seem to die off from smartweed; take off half a pint or a pint in the morning when the smartweed first comes in bloom.

I have a paper here that I intended to read—The rest of this paper is about the same thing—the good I think it would do if we had an association.

I would like to have somebody suggest something, or give me some inside track as to what to do that will be helpful.

President Baxter—You better confer with our Secretary, Mr. Stone; probably he can give you some pointers as to how to proceed and work it up.

Mr. Pyles—I might suggest—I am not sure but that Mr. Kildow has already suggested it to Mr. Wiley—that he get a number of these people together and talk this matter over, and decide upon a meeting next summer, during the bee-keeping season, when they are all interested in the matter.

Mr. Kildow told Mr. Wiley he would have some one help him with this meeting.

There are only two ways of getting bee-keepers together, that is, in the winter time, to have speakers, or some one who is used to Conventions and Convention work—or in the summer time when they are most interested in the work and will come out to the field day meetings.

When you cannot bring more than forty people together for a state meeting, it is a hard matter to do things locally unless you can get the people individually interested in this work.

President Baxter—I believe the summer time would be the most advisable.

Mr. Wiley—I have here a few names—thirty—all within five miles square. The largest bee-keeper has ninety-four hives—runs from two to ninety-four.

President Baxter—You have got the flowers down there, and, if you undertake it in a scientific way, you would make the money, and you have as good, if not better, locality than we have here in central and northern Illinois.

Mr. Wiley—I think we have a better chance if our territory was not overstocked.

It seems like we have not been able to get the amount of honey per colony that you do up here in this part of the country. Some of you claim to get 200 to 275 pounds per colony; I can't get that much.

President Baxter—I have a good many colonies that gave me 360 pounds this year.

Dr. Baxter—What kind of a hive do you use?

Mr. Wiley—I use a dovetail hive; a neighbor of mine has a ten frame Danzenbaker that is pretty fair; most of the hives are 14 1-4 x 14 and 10 inches deep.

President Baxter—The next will be the Question Box. Mr. Pyles, you have the questions.

Question—Can we breed as good queens here as down south?

Dr. Baxter—Yes, but not so early. We can raise just as good queens north, or even in Canada for that matter, as in the south, but they can raise them in March and April, and that cannot be done in Canada; but later in the year as good queens can be raised in the north as in the south.

President Baxter—Any other remarks on that question?

Question—What is the best way to teach the food value of honey?

President Baxter—What is your opinion, Mr. Root, on that question?

Mr. Root—I covered it in part this forenoon. I should have pamphlets and literature on the subject of honey to hand out to those who inquire. We have little folders that we give containing honey recipes, that tell what honey is—honey booklets and leaflets. We have some gotten up by Dadant's as well as our people.

I should utilize the public schools. I should furnish the local newspapers with a write-up of stories. If you don't get the stories you want, send to Mr. Dadant or ourselves and we can send you something; it is a great deal better to see your newspaper man and tell him something about bees, and take him in some honey, and get him to write you a story, if you can, and say something about honey, and particularly about what honey is.

I think Dr. Baxter can talk to you about what honey is; of its medicinal value, better than any one else in the room.

When we make the statement that honey will go farther than butter it needs qualifying; the different articles are used for different purposes.

When we make the statement that a pound of honey equals a pound of beefsteak—that depends upon what you want to do.

At the beginning of the war the price of honey went clear down. Beekeepers in the southland had no demand for their honey at all. All of a sudden honey began to be in demand and prices went up. What was the reason? It went into the trenches of the European war, particularly on the allies' side, and I have positive information of shiploads of it going over there. Why did they use it? Honey is an energy-producer. They use it in place of chocolates that were more expensive, and, in many instances, in place of sugar. Sugar is an energy producer, but honey has gone through one stage of digestion.

Dr. Baxter can give you technically what honey is, and I will go further.

President Baxter—Don't you think one way of introducing the use of honey would be to have demonstrations made in these Domestic Science clubs? We have them in almost every township. I think that is the best place to teach the value of honey and to make it become popular. We are doing that up our way.

Mr. Root—George W. Williams had put out a honey book that he is furnishing to schools. I think your suggestion to put it before the various clubs a good one.

There is not a club in northern Ohio and southern Canada within two or three hundred miles, I think, but what I have visited two or three times. They invite me to talk about honey and allow me to toot my own horn if I want to. I have utilized the opportunity.

When I talk before the public schools there is usually a demand for honey on the near-by grocers near that school.

I try to get the value of honey before the minds of the children.

If you could have an automatic bottle that would invert itself by some electrical device, that the bubble could be seen coming up and down—and have a card with a brief statement of the food value of honey and what the cost is compared with other things—it would be helpful.

In all our show windows in Cleveland we have nicely printed cards. Those cards are placed on certain dates and advertised in the newspapers that those display windows are going to be shown at a certain time; tell what stores and grocers have the honey for sale; and in every case the opposing grocer, who is near by and who does not have one of those display windows, clamors for it the next year.

We have those cards placed in show windows. The big distributors come to me and say: "We have got to have your honey."

By continually pushing and advertising you can get the food value of honey before the people.

We see to it that in New York city, in Philadelphia and in Boston, if the large grocers don't have the honey they get it. If we don't furnish it to them our competitors do.

Our idea is to get honey generally before the public and in the home, and to that end we have these cards dis-

tributed in the homes and in the newspapers and in show windows.

They are large cards, 15 inches square, printed in colors, attractive; they have a few brief sentences.

They are along advertising lines and we did not think it proper to put it in journals.

At the Westfield Pure Food Show we had two demonstrators.

This plan we followed in all the minor size cities. We found it was not profitable to have demonstration in the large cities, so we followed this plan in the small cities and towns, like Syracuse and Rochester, and these demonstrators went there—a girl who could show and illustrate as she talked the food value of honey.

President Baxter—Dr. Baxter, what can you add on this?

Don't you think, Mr. Root, your honey would sell better if you had transparent paper on one side of the carton, so that the honey could be seen?

Mr. Root—The trouble with transparent paper—it breaks through. We were afraid of its breaking.

Mr. Wiley—I sold a grocery-keeper eight cases of honey last year. He ran out of honey about the holidays, and he got a case of air-line, St. Louis.

Mr. Root—You remember the comb honey selling season does not begin until September and stops about this time. Comb honey does not sell outside of certain seasons.

President Baxter—Dr. Baxter—

Dr. Baxter—I think, when it comes to selling honey, the average beekeeper exaggerates the value of honey; he is enthusiastic about it and he tells a story to the public that the public do not believe. In the first place, when he gets to talking about honey as a medicine he is exaggerating honey because honey is not a medicine; it is a food. It is no more medicine than a handful of cane sugar out of a barrel. There is no poultice or any concoction that you can concoct in medicine that depends upon honey. It is true, druggists are using it as a simple syrup where they used to use rock candy; honey is cheaper. As to the laxative quality of honey: I don't know about the liquid, it is in the comb. It acts the same as bran that has become so popular in the last year or two.

A man will sell, say, a can of honey to a family. He tells them if there is a cold in the family, to put honey in milk and boil it, and it will cure a cold. The fact of the business is, they do use it, and the cold disappears, but the cold will disappear anyway in three days.

They will tell you to add some vinegar and pepper to honey and put it on a sore throat. It has no virtue only as a poultice to keep away the cold wind.

Honey is food just the same as any other sugar, only better, because it is digested.

DR. A. C. BAXTER, 1st V.-P. Ill. S. B.-K. Assn.

HONEY AND ITS COMPARISONS WITH OTHER SWEETS.

It is the fault of man to praise highly any thing in which he is interested, the bee-keeper being no exception to the rule. He is fond of praising his honey as a food and a "cure-all" for the diseases to which the human body is heir. He does not praise honey with the idea to mislead or deceive, but from lack of knowledge of what honey really is. When he tells of the medical value of honey he bases his opinion on what he really thinks has taken place as he has used it in various ailments and, being still able to tell the

tale, he believes honey the agent that restored his health. When the facts of the matter are carefully looked into, it is discovered that he would have been well in a few days without any treatment.

Another common fault is to explain to the housewife the food value of honey and compare its value with some common article of diet. For example, that seven ounces of honey is equal to a quart of milk. True it is; but the good housewife don't believe it, and, at any rate, you couldn't expect her to replace milk with honey. On the other hand, if she learns that strawberries or peaches have a better flavor when sugar is replaced with honey, or that bread and cakes made with honey keep better, not drying out as when made with sugar, she is at once interested and will get some honey to see if the story is true.

It is as an article of diet that honey must be known, if it is ever expected to become more than a luxury or a sweet to please the children, an article that surpasses all other sugars in the diet of mankind To understand this it might be well to explain what honey is and the digestion of the various sugars. The chemist tells us that honey contains forty per cent levaulose, thirty-three per cent dextrose, and one and a half per cent sacchrose, the rest being moisture, coloring matter and dextrine (vegetable gum). This percentage of sugars varies, due to the nature of the nectar and age of the honey. In old and well ripened honey sacchrose (cane sugar) is converted, by a ferment present in all honeys, into levaulose and dextrose.

Honey, therefore, consists of two principal sugars, leavulose (fructose) and dextrose (grape-sugar). These sugars derive their names from their action on a ray of polarized light, their chemical formula being the same. Leavulose in solution turns the ray of light to the left, it being leavorotatory, and, as its name indicates, is a "left-handed" sugar. Dextrose, on the other hand, turns the ray of light to the right, being destrorotatory, and is therefore a "right-handed" sugar. The predominating sugar in honey is leavulose, it being the sugar that gives honey its high food value. All sugars are digested and assimilated in the small intestine. Sacchrose (cane sugar) is split, by an intestinal ferment, into parts of levaulose and dextrose, and is then absorbed, while honey already containing these sugars does not have to be acted upon by a ferment and can be assimilated by any one, even if the ferments are absent. Levaulose is very readily absorbed in the intestinal tract, while dextrose, without the presence of levaulose, is very slowly absorbed. In some manner the "left-handed" sugar in its passage through the intestinal walls pulls along the "right-handed" sugar.

The glucose of commerce, known in America as corn syrup, must be regarded as mixture of dextrose, maltose and dextrine, and is prepared by hydrolysing starch by boiling with a dilute mineral acid. After the acid is removed and the solution clarified, the liquid is concentrated in vacuum pans to the density of syrup. A small quantity of solution of sodium bisulphate is added to bleach it, to prevent fermentation and to inhibit browning. The maltose of this mixture must be acted upon by a ferment before it can be used by the body, and then it forms more dextrose. So it is easy to see that an individual who uses this syrup is receiving very little food value for his money. The only thing accomplished is the softening of a little dry bread. So, with all of man's methods, nature's sugar—honey—still continues to be the best sweet for man.

President Baxter—In regard to honey as a food—What is its nutritive value compared to a pound of meat or butter?

Dr. Baxter—That may be read in "Facts About Honey," that pretty nearly all the Bee Supply Houses are putting up. I believe it was Dr, Miller who said that seven ounces of honey equalled a quart of milk. True, it has a food value but you would not use that honey under the same conditions as you would a quart of milk. You cannot expect a fellow to give up a quart of milk and take seven ounces or honey in place of it; and if you do tell him that seven ounces of honey is equal to a quart of milk he wants to know how you know.

It is said that seven ounces of honey is equal to fifteen ounces of beefsteak in energy producing value.

Our Bureau of Standards have worked that out, but if you tell that to the average man he doesn't believe it.

I had a card out at the Fair that had those food values on; it was posted there for the purpose of hearing the comments on it, which I did hear. The majority of the people wanted to know —"How do you know?" They did not believe it. You could not give up your time to explain that. It is a scientific complicated method arrived at, with a great deal of theory. When you come to the practical side of it, it is altogether another question.

It is like a good many things we learn in medicine. The theory of medicine is one thing and the practice is another. In the medical schools they take up every known disease and give you the diagnosis and symptoms. The case is given you in the text book and you can ask any physician you ever met if he ever had a case like the one in the book and he will tell you he never did; and you will not; they don't exist. That theory is beautiful, and you imagined when you went out you could have set the world afire and could cure everything, but you found out that the theory, while it developed your brain, that is all it did for you. The practical side of it was another question; it had to be learned by experience.

The practical side of the food value of honey in comparison with other foods you can tell the people but you can't prove it to them; they don't believe it. The one thing that you can hammer at them is to give them the uses of honey. That honey when used in baking—the cakes or cookies will keep longer and not get hard, and if the housewife once tries using honey in baking, she will find out it is true, and she will buy honey.

You tell her that it is better to use honey on strawberries and peaches, than sugar, and she will try it and like it and buy some more, but, if you tell her it is equal to a quart of milk, she will not stop buying milk and she will not buy honey—you have not proven anything to her.

President Baxter—I heard people say: "What is the use of buying honey? I can use butter and butter is better than honey." People question the price more than anything else in many instances.

Dr. Baxter—That is true; the price has a great deal to do with it. People look on honey in one sense of the word as a luxury. They are getting out of that notion though, fast.

You must educate them as to what the value is. That it is good; it is good to eat. If you could get them to use the liquid honey in cooking, canning preserves and making jelly, this they would be willing to try. The housewife is willing to buy it and pay the price, after she has once used it and knows what the value is.

Mr. Pyles—Could you tell about the relative sweetness between sugar and honey?

Dr. Baxter—What do you want to compare it with, the taste?

Mr. Pyles—No, I am talking about relative sweetness.

Dr. Baxter—Relative sweetness is a relative term; it is a good deal like cold and hot. One individual says, "I love this weather." The other fellow, "I wish I were south and away from this kind of weather." It is the same way with sweets. One individual will try a solution and tell you it is not sweet, and you woud say it was a syrup. It is only a relative term. You take individuals who come to the table for coffee—and notice those who take sugar, notice the different amount of sugar they put in their coffee, and, if you were that gentleman, you would probably think one was

using too much sugar and the other not enough.

Mr. Dadant—What is the proportion, that is the comparison, between sugar and honey?

Dr. Baxter—I can't tell you what it is in per cent.

Mr. Dadant—The sugar is sweeter.

Dr. Baxter—Yes.

Approximately how much sweeter?

Mr. Dadant—Takes a less amount of it per weight to sweeten a given amount of solution.

Dr. Baxter—Say you had a cup of coffee and desired a certain amount of sweetness?

Mr. Dadant—I would take a less amount of honey in coffee than I would of sugar.

Mr. Pyles—The reason I asked this question, I read somewhere the other day that pure ripe honey was 3 1-3 times sweeter than the same bulk of sugar and water.

President Baxter—It is not; we have made the test. Two pounds of sugar dissolved in one gallon of water will weigh eighty degrees. It takes 2 1-2 pounds of honey fermented to make the same quantity of absolute alcohol.

Mr. Root—There is another phase of honey as food. I simply speak of this, as my own taste. Honey that has been heated has some of its flavor driven off. I can't say I am particularly fond of honey upon hot breakfast food. The minute you begin to heat honey it takes away some of its flavor. What I do like is honey on cold breakfast food. You take liquid honey and pour it on thick, and then you have all the honey there is in the honey and the breakfast food. We have breakfast foods served cold; that is the way we prefer it. I like hot breakfast food, but I don't like hot honey on it. I will say, in this connection, I don't believe there is any bottled honey that is put up in the ordinary way (that is a confession), that has been heated to 160 degrees Fahr. to prevent its granulation, that has got the flavor that the same honey has before it was heated. Just a few days ago I had some very fine raspberry honey, and I said to Mrs. Root: "When that honey begins to granulate, you let me know and I will stop its granulation, and I won't change the flavor of it." She said, "All right." "Now, don't you send it over to the Honey Bottling Department, because I want to try an experiment."

Well, when it began to granulate, I turned on the faucet in the hot water side of the wash tubs and took my 60 pound can after it had granulated and raised the temperature to about 190 degrees. The reason is, as soon as a cold tank of honey was put in there the temperature of the water would drop. Leave it in 40 minutes; and leave it in another forty minutes; take it out; when I took it out and put it on the table and let it cool. When this had cooled, I called Mrs. Root and said, "What do you think of this honey?" She replied, "That is pretty good. Is that the raspberry? What did you do with it?"

I treated it as carefully as I knew how, and, while I don't suppose the average man who buys bottled honey knows the difference, those who are watching the thing know there is a slight difference in flavor. The chemist knows, and the practical bee man knows.

The science of bottling honey has not come to the place where it will later. I propose to do some experimental work.

Some few years ago I had our man in the bottling department bring in some honeys. They can take white clover and heat it, and I venture to say there is not a man in the room who can tell before it is heated and afterwards. Alfalfa stands it pretty well, changes a little; clover will stand heat better than any honey I know of. There are some other flavors that are easily effected.

According to my experience and observation, heating honey at 130 degrees, and keeping it hot five hours, will keep it in liquid condition longer than honey heated at 160 degrees and cooled.

The flavor of long heated honey is not as good as that quickly heated.

I feel as though we have only begun to scratch the ground.

Honey in the comb has a flavor; wax has a flavor, and, if I want real fine honey to take to my guest, I give them comb honey.

I say, "This is raspberry," or that or the other, and give them that flavor.

Mr. Dadant will tell you that his visitors, when they go into the wax room—persons that are not bee-keepers—will say, "How nice it smells in here."

It is nothing but pure beeswax, and when we take the wax away from the honey we take part of the flavor.

I prefer comb honey for my eating, because it has the virgin flavor that has not been modified or changed in the least.

Question—Why not authorize an Inspectors' Conference the coming season, for the purpose of getting uniform work done among the deputies?

President Baxter—Who would have the authority to do that?

That question is a poser. I do not know anyone who has the authority. The State Inspectors themselves could call each other together if they wished to.

Mr. Pyles—If the State Association could authorize the holding of field meets in the state of Illinois, could they not authorize an Illinois Inspectors' Conference?

President Baxter—That question does not say that.

Mr. Pyles—But we are in Illinois and doing Illinois business.

President Baxter—There is only one Inspector in this state; the others are deputies.

Mr. Pyles—This question says deputies:

Why not authorize an Inspectors' Conference the coming season for the purpose of getting uniform work done among the deputies?

President Baxter—Mr. Kildow, what is your idea?

Mr. Kildow—It might be all right to call a meeting for that purpose; I never have yet. I would want to get a bunch of deputies together and decide what to do.

President Baxter—Don't you think it would be a good idea?

Mr. Kildow—I do. I tried to get one place last year; the party could not have me there, and I dropped it.

President Baxter—Do you not think it would be a good idea to think this over, and call a meeting early in the season, before the season opens, of deputies and Inspectors in different parts of the state, and formulate some form of action? And you could work the territory more thoroughly, cover more territory, and give a record of what had been done.

Mr. Kildow—When I find out what the Civil Service are going to do I will know better what to do this winter, and if I can get any information from the Civil Service I want I think this spring there will be a meeting called.

Get a list of these who have passed the examination, and go over the ground thoroughly and discuss it, and lay plans.

Mr. Coppin—As I understand it, the deputies have been working under the instruction of Mr. Kildow, the Inspector, and each deputy would send in their report to Mr. Kildow, so that he knew what was going on with each deputy, and working under his instructions.

President Baxter—The purport of this question is to have the deputies get together and make suggestions of the plans, and see if they cannot better the working of the inspection work; improve on it. A good many minds you know will be of benefit to the Inspector; what one does not think about, the other will; they might make suggestions that would improve things.

Mr. Pyles—I wrote this question for one purpose—to start a little discussion, but individually, so far as I am concerned, I have no fault to find with the way I am situated in the inspection work.

If I have anything to argue about, I go to Mr. Kildow, and say, "Don't you think this would be a good idea?" But other deputies don't have that advantage.

Some of these people may have something up their sleeves that I don't know anything about, but maybe, when we get together and some fellow goes through a colony of bees, I may learn something I do not know.

Mr. Kildow—I think the idea is all right. We did fix it up last spring to meet near Lincoln, but the party there could not have us.

His idea is to get deputies together and go over with each one and have them tell what they think best to do, sift out what has been said, and follow the plan which looks most feasible. That is the idea he has. I think it is a good one.

Mr. Williams—You may come to my place; I would like to have you.

Mr. Dadant—Would it not be a good idea to get those men who have been accepted as deputy Inspectors, who

have no chance to practice, to get with others, and get an idea of what is required of them?

Mr. Pyles—I think I have gone over this with the Inspector a good many times, that, if I were the Inspector and going to start a new man, I would want, were I the new man, to stay at least two days with him and get acquainted with the work.

You must go out and find out every phase of disease—every condition he must run up against—and you cannot find this out in a day. There must be some things he must see for himself, before he is going to learn how to do it.

It has taken a long time for Mr. Kildow and me to know even what we know about it; and I am sure Mr. Kildow will know how to handle men as he meets them in the country.

These men who are appointed deputies may know disease when they see it, and they may not.

He must be tried out—whether he is going to be able to tell European foul brood from American, or pickle brood from starved brood, or whatever the condition may be. A lot of them do not know, even among Inspectors.

Mr. Coppin—What gives you the authority to be an Inspector or a deputy? You pass an examination, don't you?

Mr. Pyles—I did.

Mr. Coppin—Who gave you the papers for being a deputy?

Mr. Pyles—I have none.

Mr. Coppin—There must have been something given you; how do you know you are a deputy?

Mr. Pyles—I do not know. That examination that you pass states whether or not you are competent.

Any man can pass an examination; he can read everything that is necessary to pass an examination and answer the questions all right, but when he goes out into the field he would or might not know much about the actual work. It is possible for a person to pass everything asked, on paper, but it is up to him afterward, as an individual, whether he is able to do the practical work—whether he is going to be able to approach his fellow-man and get along with him.

If he answers every question that a bee-keeper fires at him, he will answer a good many in the course of a week or ten days or during the season. They want you to advise them on general politics and everything else.

Mr. Coppin—I do not believe he would pass the examination unless he were a practical bee-keeper in the first place.

President Baxter—The civil service law requires certain things, and, when those things are complied with, that ends it; you cannot discredit him.

Mr. Pyles—A man may pass the highest examination, and the bee Inspector need not give him any work if he does not want to. The question is this: He should have that liberty. Suppose a man passes 99, and the Inspector knows he is not a fit man to do the work—that he cannot tell American from European foul brood—but he can explain the process on paper.

I heard a man read a paper in the State House. He told all about European foul brood and its treatment; and then he stated that he had never seen a case in his life; and I don't believe he ever found a case in his life, although he is one of the deputies. He is one of the men that the people in the Association demanded be kept because he read a good article on European and American foul brood.

Dr. Baxter—I agree with Mr. Pyles. A man can read the A, B, C, and other text books on bee diseases; take our report, and read the first few pages—and he can pass an examination, and he would not know what he was looking for if he tried to find a case of American or European foul brood.

You take many physicians practicing in Springfield, if they were to see a case of yellow fever, they would not know it. It is the same way with a man who looked in a hive—he might have a suspicion that it was one out of four foul brood diseases. Passing an examination is no sign he knows anything about it.

There are many men who have wonderful book knowledge, but, when it comes to practical things, they are very short.

President Baxter—What are the provisions of the civil service law? It is supposed to get competent men.

Mr. Pyles—It compels men to pass a certain standard of examination; then he would be permitted to serve if

Mr. Kildow saw fit to allow him to inspect apiaries.

President Baxter—Could he send any one else out?

Mr. Pyles—Not under the civil service.

Dr. Baxter—The point I understand that he makes: He should take that man and give him some instruction before he sends him out.

President Baxter—I agree with him. But I contend if he passes the civil service you cannot debar him.

Dr. Baxter—If he is incompetent, you can; take it up with the civil service commission and prove he is incompetent.

Mr. Coppin—Who has the authority to do that?

Dr. Bater—The State Inspector of Apiaries could file charges.

Mr. Wiley—That examination is not rigid enough. The written examinations that we take are all right as far as they go, but they do not go far enough.

I think these deputies should be examined orally by some competent person.

As Mr. Pyles has said, a man can read the A, B, C, or read Dr. Miller or somebody else on bee culture, and go down and pass an examination, or he could get enough out of this annual report, but he would not be a practical man for the place.

I think there ought to be an oral examination and that they should be examined by a competent person, before being sent out.

President Baxter—I would want to see them manipulate hives.

Mr. Pyles—I would want to see them diagnose.

Mr. Kildow—I have one deputy sent me by the civil service who passed an examination of 94, I think, I believe he was second on the list, and I am satisfied in my own mind that if I gave that man much work to do he would have a hornet's nest around him. That man is not fit for an Inspector, while he passed the best kind of an examination.

Passing the examination is only one step, the first step to what a man ought to be; therefore it places me in rather a bad position—the way the civil service is conducted. They pass him on an examination, on paper; I try to pass him on his qualifications. I do not know how many more there are like him.

Mr. Dadant—Have you the right to reject him?

Mr. Kildow—I could give him no work; simply give him work when I needed him; that is the only loop hole I have.

President Baxter—If they enact the Economy and Efficiency Law we are going to be up against it along these lines. We will have men for Inspectors and deputies, and have the Horticultural Societies at the head that do not know anything about the vocation they are chosen for, and, instead of being efficiency, we are going to have inefficiency; I do not know about economy; guess the salaries probably will be doubled.

In Ohio they have rejected this Economy and Efficiency plan two years ago they talked of it. We want to watch our legislature pretty closely this winter. We want men to fill the various offices who are experts in their vocations to handle those societies and care for their interests.

Mr. Kildow—The Inspector wants men who can handle men as well as disease.

Mr. Williams—Now as I understand it: I took this civil service examination and passed way down to the bottom; I took it with the idea in my mind I wanted to learn something about the bee business. I did not expect a job because I had a better one than this, but I got the bee fever and I wanted to get out of it what there is in an experimental way; I think the Inspector (excuse me for being personal) does not understand his power. If he finds a man who is incompetent it is his duty to the bee-keepers of Illinois and the legislature that appropriates the money, and the taxed apiaries that help pay it, to fire that man bodily. He has got the power to do it; all he has to do is to say he is not competent.

Mr. Kildow—I have to prove it.

Mr. Williams—I have held two civil service jobs and they can fire you bodily, and then the man who is fired has to know what he is fired for. Then

you give your charges. The burden of proof is on him.

I remember a man that was in the civil service job that I am in at the present time. When he was put there, everybody said, "All that fellow is fit for is to drive railroad spikes on a section." He became one ot the most efficient men in that service. A man cannot learn these things without practical experience. The first thing is to get the eligible list that you have to draw from and try your man out.

I happen to know a very capable man helped to get up those questions and examination papers and stated whether these people were competent or not so far as he knew. The next thing to do is put them in the field and find out whether they are competent.

Mr. Root—Our civil service law, we have done away with it. I have known of some young students pass an examination of whom I know would not be fit for the place.

In politics, when you stir up a little hornet's nest it does much harm. If you can, pick out your men recommended by your President, you are going to get better men than if you take some of those civil service examination men because they pass the examination. I know some of the students of the State University who took up beekeeping in our state. They had answered the questions so far as writing them on paper all right, but I saw they had not got the basis of it.

It seems to me this foul brood matter is so important it ought to require something like that of the school teachers. They pass an examination and then they have to have so much experience in order to get into certain schools.

I go out with men in Ohio and they have told American foul brood, but when it came to European or sack brood they were up against it. I think that is a pretty difficult matter to determine.

They said, "How am I to tell absolutely between each brood and European? By a microscopic examination you may sometimes detect it. You can tell European by the odor. About 1889, in Gleanings, I wrote up "New Bee Diseases." I have been following this ever since. I don't believe I could tell a student or that I could put it in A, B, C of Bee Culture, but I could say to a man, "That is European and that is American."

The most important thing is to have as a deputy a hale fellow well met, who can get along with people; his lack of knowledge he can soon make up.

Mr. Kildow—My instructions say, "If I make the charge I have got to back it up."

A member—It is results we are after. Mr. Kildow has been Inspector for quite a while; it looks as though he should know who is efficient and who is not.

Mr. Dadant—It seems to me that Mr. Kildow has half a dozen deputies; he finds one who is not efficient, and he simply does not employ him. There is no deception in that. There is no reason why he should be demanded to employ a man who is not competent.

After you have tested your men, if you find one who is not practically competent, put him aside without making any complaint, and there is no reason why he should have any cause to find fault.

Mr. Kildow—It is left with me to send him out. If I find he is not a fit man to go, I let him stay at home. If he keeps at me about going, I make some excuse.

Mr. Dadant—All this discussion is raised by the suggestion of Mr. Pyles that there ought to be a meeting of the deputies with the Inspector. I believe it is a very good idea. I believe the Inspectors can inform each other and give information to the main Inspector as to their ability; and I believe the Inspectors should be called together and matters discussed between them and practical tests made by them before the crowd of them.

Question—Why do not more women attend the Association meetings?

Mr. Kildow—The men do not bring them.

Mr. Dadant—I have not been in the habit of taking my wife to conventions. There are only one or two ladies present, and it is not enjoyable for her. Even in Europe she was alone in the meetings. In New England I have attended meetings when there were fully as many ladies present as gentlemen.

In the Adirondacks, half of thirty present were ladies.

Also, at Mr. Wright's, at Albany. But, as a rule, as it is here, there are

only a few ladies. I think we should make it a practice to bring our wives.

Mr. Root—What is the matter with the secretary issuing invitations to the ladies as well as to men?

A member—I move we adjourn until tomorrow morning at eight o'clock sharp.

Motion seconded. Meeting adjourned until tomorrow morning.

MORNING SESSION,

November 16, 1916.

Meeting convened 9 a. m.

President Baxter—We have a paper this morning, by Mr. Pyles. The subject, "Inspection Work and Possibilities of Its Advancement."

Inspection Work and Possibilities of Its Advancement.

By Mr. I. E. Pyles.

Mr. President and Fellow Bee-Keepers: This subject has been wished upon me, and if I make a sad failure just let me have all the charity that is due in such cases.

Inspection work is comparatively very recent, as it is only in the last few decades that the government has taken upon itself the work of seeing that the individual is protected against disease among human beings, as well as their property.

Bee inspection is among the latest.

As it is hardly necessary to go into all the details of all the causes leading up to the election of an Inspector by the Illinois State Bee-Keepers' Association, we will just take up and notice some of the work as it has been done by the Inspectors and their deputies, in this state, as well as some suggestions for improvements as they appeal to the writer. The first record of inspection work in this state dates back to January 18, 1903, as published in the third annual report. On that date, under a special call, the State Association met in room 17 of the State House, for the purpose of electing a Foul Brood Inspector, J. Q. Smith being duly elected.

We find in the same report of the Thirteenth Annual Session the Inspector reported that he had traveled three thousand miles and visited thirty apiaries, but failed entirely to state if he had been able to find foul brood in the state. In the Fourth Annual Report we find the Inspector reported having traveled two thousand miles, visited in thirty-two counties, inspecting something over three hundred colonies, still not reporting a single case of foul brood in the state, although he does say it is in the state.

Now let us compare these two reports with the report of 1915, and see if we have any improvement or not; and, if we have, then see if there is room for more improvement, and make such suggestions as appeal to us practical.

The foul brood Inspector reports for 1915 two hundred and seventy-one days' work for Inspector and deputies, with six hundred and thirty-seven apiaries visited,—with nine thousand four hundred and two colonies; and two hundred and thirty apiaries diseased; one hundred twenty apiaries having American foul brood; one hundred seven apiaries having European foul brood; twenty-six colonies being destroyed, with a total expense of one thousand six hundred thirty-four dollars and thirty-seven cents.

In a comparison of records we find the former Inspector appears to have traveled first to the northern part of the state, then to the southern; and the money seems to have been spent in traveling expenses, as the average distance traveled was one hundred miles per apiary, while under the present Inspector the work has been more systematic, routes were laid out, not to see how many miles could be traveled but how many apiaries can be visited in a given distance, consequently we do not report how many miles traveled but how much work is done.

A comparison of the 1903 and 1904 reports with the report of 1915 is valuable reading, and worth the time spent by any interested bee-keeper.

Now, for the suggestions of improvement promised that may be made; in the first place I would suggest that, instead of laying out routes along railroad lines, certain counties that are badly infected with diesease be thoroughly gone over and cleared up.

Let these counties lie in a body as near as possible and if necessary use quarantines and compel the work to be done, before they are allowed to ship honey or bees from the premises infected.

Let not too much territory be attempted the first year. Keep up the work in the state as it has been done, outside of the territory outlined, and it looks to the writer that it would take less time and get more work done for the money that can be done, possibly by the present system, for it is a known fact that, as long as we follow the railroads only, there must be in most counties a great amount of territory not visited and sometimes the largest bee-keepers are not nearest town, and while the civil service does not wish the Deputies to have livery hire it follows that they will not go far into the country, to do the work that is needed done.

Besides, if it is understood that the entire country is going to be cleaned up it will encourage some that are faint hearted as this has been one of the bones of contention, that the Inspector has to contend with, the apiarists often say, "What's the use for me to clean up when my neighbor a mile and a half farther on is not going to be visited?"

Now just one thing more and then I'm through:

I am not certain if this is strictly my place to make this suggestion, but here goes, anyhow:

In the matter of records: That they be kept by the Card Index System, and I have heard arguments on both sides of the question, and after talking the matter over with Mr. Kildow, the Inspector—with C. P. Dadant, and others—I have decided, with the help of others, to advise the said system for this reason:

Each individual case will have a record of its own; not only that, but without hunting over each year's records, for a number of years, to find the history of an apiarist and how long he has been harboring disease around him, it will all be on one card for as many years as it is necessary to keep a record, because when the record shows him clean for two years in succession it will not be necessary to look after the individual case any longer.

After talking the matter over with Mr. Dadant, by his suggestion, I wrote Mr. Burton N. Gates, of Amherst, Massachusetts, for his Card Index System, and through his kindness I am able to present them to the Inspector and any others that may wish to look them over, and I would suggest that they be included in this paper.

Now, fellow bee-keepers, it will not offend me if my suggestions are not accepted, but after serious thought this seems to me to be a decided help in inspection work.

I thank you.

Mr. Pyles—The quarantine card is presented to the Convention for inspection.

You will notice this card must be filled out by the apiarist and given to the Inspector the day he is quarantined.

The other card is only mailed to the Inspector after the work is completed.

Mr. Williams—Do you think from those cards you could find out how many people are keeping bees in the state of Illinois?

Mr. Pyles—Absolutely sure.

Mr. Williams—How many keep bees in the city of Pekin?

Mr. Pyles—I don't know.

Mr. Williams—You have not money enough probably to find out.

Mr. Dadant—We can find out as far as we can go.

Mr. Williams—I live in Pekin; I have lived there for eighteen years, and I don't know. Because I have not made it my business to find out, and to pay a man to find this out you have not got money enough appropriated to find it out. Let us not attempt anything that is too big for us to handle.

The first thing I think should be done is to find out where the bees are, who has them, and that is an awful hard thing to do. I do not know how it can be done unless you have a man (now I am not talking for more men) but I do not know how you can find it out unless you have a man in your county who will make it his business, for the good of the cause, or for pay, to find out who has bees in that county and report it to somebody.

Mr. Dadant—I wish to answer this objection to the use of the Card System: I grant that we cannot find all the bee-keepers. I grant we have a very imperfect system, but I hold, after an examination of three states, that the only way to get the system better is to use the Card System. If we go and examine a man's bees—hundreds

of apiaries are examined in one year —and if we have no Card System we have no record except the few letters that you have. We do not know what we have been doing; what we have done the year before and the year before that and the year before that.

If all the men whom we find to have bees were to make a record by the Card System, we would have that much to go by, and we could refer to it whenever we needed information.

Our Inspector knows of several hundreds of bee-keepers; positively he has visited several hundred; he can, on his Index System, make a record of all those people and mark upon the card who they are—how many colonies—what kind of bees—whether careful or careless, whether there is disease or not—what kind of disease—whether treated and whether the man is competent to treat.

If this system is followed from year to year, these parties who are on the Card System will be recorded in such a way that you can find them—and through these people you will find others, and if you keep on adding to the Card System you will have a good record.

But if you do not begin the Card System you will be in the dark in a year or two, especially if our Inspector changes.

J. Q. Smith was the Inspector for a long time. There were no records kept, no records were left as to what he had done; no knowledge was left as to where the disease was. If he had been requested to use the Card System, and had put the names and addresses and the number of colonies, the number of apiaries which he visited—whether they have disease or not—we would have known much more about the conditions that existed.

I believe there is a great advantage to be gained from that.

My reason for upholding it is, as you have heard.

I found the Card System used by Dr. Gates, of Massachusetts.

He is the originator of it. I saw it in use in Canada very extensively. I thought they were the originators, but Dr. Gates told me they borrowed it from him.

I saw the Card System used in Texas.

By this Card System, everything is marked on it that can be of use to bee-keeping.

If you have deputy Inspectors—instruct them to fill in the cards wherever there is a bee man, if they have only one hive. This makes a record to which you can refer in case of necessity.

This will make it very much better than with nothing to tell where we have been or what we have done except the record on the books of the Inspector, which is not at all as satisfactory as the Card System.

Mr. Kildow—We have a record, but I have to dive through it if I want to find out next year what we did this.

We have a record of everything that has transpired but it is incomplete in a way. I cannot see it at a glance; I have to look it over, look over a number of pages, probably if I have been to a party two or three times that year.

I have got to hunt over a lot of record to find it.

It is scattered over the book. Since I have begun to study it over I think the Card System would be better. I could read it in a few minutes time.

I have a record of everything that has transpired, but it is scattered. I have to hunt it out.

I think it would be much better, from what I can see of this card business, to have a Card System.

I am compelled to keep a record of everything for the state. I have had to do it; I have it all down.

Mr. Stone—I want to say in regard to the Card System: I did not give that attention; I do not know just the intent of that card, but I will say this: That, when the legislature made the appropriation for our Honey Exhibit at the Chicago World's Fair, Mr. Hambaugh was the President; I was Secretary. We had charge of the Honey Exhibit at the World's Fair. The exhibits were to be in the first of May, at Chicago, and it was away in May before our legislature made the appropriation, and we had everything to do.

We got our heads together—what shall we do? I said: "I have a list of the crop reporters of the state We will send return post cards to them and have the return card lined for names of bee-keepers. In about two weeks we had the names of 6,000 bee-keepers in the state; there were

some from every county in the state. Some of the crop reporters sent as many as ten names; we have that list yet.

President Baxter—You can get another one the same way.

Mr. Stone—Mr. Kildow has access to all the crop reports that come in the December number of the State Report. He can send them out and get as many names in that way and then he can have a pretty good starter I would think.

Mr. Pyles—My idea seems to have been entirely overlooked. The only change that I am asking for is the Card Index System. Only that the record of work done will go on the card.

There is another thing: I am only advocating the laying off of certain territory for the first year, and make that the area that must be gone over thoroughly, and not one individual bee-keeper left out in that territory without his bees being inspected and without his being compelled to clean up.

By doing that, and placing a quarantine upon his bees and honey and stuff, it is to his interest to get busy and clean up if he is producing a pound of honey for sale; and, if he is not, it is time to get after him.

The card index system only takes the work up from now on as it is to be done.

So, when I report to Mr. Kildow I have inspected so and so's bees, it is on this card, and is filed away.

If I visit that apiary again, it goes on that individual card in this record, and what has been done from time to time is recorded. If he has been harboring disease for five or six years, and there is no improvement shown, there comes a time when the Inspector will step in and see that something is done.

When we go up through Marshall or Putnam or Peoria County, we follow the railroad, follow the railroad sections, and there are some places in the county that are never visited at any time. Possibly some places within a few miles have not been visited because it is too far to walk. If he is going to make a canvass of the whole county, he will have to get all this work done before he quits, so that there will not be a man left out if he has only one box hive.

We have got a lot of good, efficient work done, but the Inspector knows as well as the deputy that some of this work that should have been done has not been done, and it cannot be done under the present system.

The Inspector gives me orders to travel as cheap as possible, to avoid livery hire, not to live at a $2.00 or $3.00 a day hotel, but to get a meal at twenty-five cents where we can; to get as much work done as possible for the money.

I think that is the system he has carried out ever since he was the Inspector; but, if you lay out a certain territory that has got to be cleaned up before you go any farther, I can see how, with fifty-one counties, it is going to be possible to cover the territory and cover it thoroughly, and in the course of two or three years we will have the state cleaned up.

Mr. Kildow—I would like to have this matter threshed out now, and have the Card System adopted, if that is the best method of keeping the records.

A Member—I would like to ask the nature of this quarantine and what it constitutes.

President Baxter—Have you read the state law on inspection? You better read it and make yourself familiar with it.

Mr. Pyles—This individual card says: "My apiary has been examined." It gives the date, the type of hive, et cetera.

Mr. Dadant—I think it would be a good plan to read what the card says:

"This is from Massachusetts:
J. N. Smith.
The date—1915.
Type of hive—Langstroth.
Winter loss—None.
Spring count—4.
Present count—6.
Examined—6.
American foul brood—None.
European foul brood—3.
Sack brood—None.
Treated—None.
Destroyed—None.
Remarks—Good Bee-Keeper.
To be reinspected 191[illegible]
Quarantined July 25."

Then comes the next inspection, 1916:

"Winter loss—1.
Spring count—5.
Present count—7.
Examined—7.
All O. K.—Colonies in fine condition.
Released August 3d."

Now, if this man ever has foul brood again, the card will give a clue to the Inspector as to his previous condition, and the same would be true of the condition of every bee-keeper he sees.

He will have this information where he can turn to it readily and have all the information in very close form, so that it can be gotten at at any time.

And this index can be passed from one Inspector to another, and the deputies can be supplied with these cards, and they can return them to the head Inspector.

President Baxter—Anything else on the subject?

A Member—I think it would be a good idea for the Association to move that we adopt that system.

President Baxter—I have instructed the Committee on Resolutions to present a resolution to the Association endorsing this and other things that have been brought out, and requesting the State Inspector to adopt it.

Mr. Pyles—The other part of this paper: That is my baby; That is the part of laying out a restricted area.

President Baxter—That will be included.

Anything more on this subject?

Mr. Pyles—I think it would be well to have a copy of these cards appear in the records.

President Baxter—Mr. Stone, you may have a copy of the cards inserted in the records.

Mr. Stone—The cards read as follows:

Quarantine and "Clean-Up" Order.

The Commonwealth of Massachusetts —Bureau of Inspection—State Board of Agriculture, July 25, 19...

County, Hampden; Town, Springfield.

My apiary has been examined and quarantined by the Inspector, who directs me to treat all designated and diseased colonies and clean up the apiary according to his instructions, which I will do before August 10th, 19.., reporting it to the Inspector of Apiaries on the card provided.

I would like a bulletin on the treatment of diseased stock.

Name .....
Owner or person in charge.

Postoffice.....

(Daily Report to be used in Quarantine Cases.)

Post Card.

Report of owner to be signed and mailed on or before ...., 19.., to the Inspector of Apiaries, Amherst, Mass.

Dear Sir—This day I am pleased to report that I have completed the treatment of all diseased colonies and have cleaned up my apiary, complying with all instructions of the Inspector of Apiaries.

(Signed).....

Date....., 191..

Instructions—Follow.

A Member—I think, if this could be followed up in the way suggested, it would be a great help to the bee-keepers in the country. I hope the Association will decide to adopt this card system.

President Baxter—I am a stickler on this thorough work being done; I have advocated it every time I have been here, and I still insist that it is the only feasible way of cleaning up the state. This card system is the only system of keeping records so that you can see them at a glance and know just what has been done, and it will give you a clew as to what is to be done; and this method of cleaning up, thoroughly, certain sections, I have advocated for years, and I believe it is feasible and that it should be done.

When Mr. Kildow and I called in Sangamon county we visited the greater part of the county in half a day. We inspected everything; we did thorough work; I know we did. We cleaned up everything that was there, and we have not had anything since, and that can be done in every section of the state if it is gone at in a determined way.

If you can clean up three or four adjacent counties, you will finally have it all cleaned up.

We have a thousand dollars that ought to be used up.

You never had a better chance in the world to clean up foul brood than this year.

If this work had been carried out in this systematic way, this money would not have been there, and we would have cleaned up a dozen counties.

One bee-keeper will tell you where another bee-keeper is and you have everything in your route, in succession. You can find out where foul brood is and know where it is located, and see that it is cleaned up.

Mr. Wheeler—Undoubtedly by cleaning up a certain area the work can be done much cheaper.

President Baxter—According to our state law, when a man requests the State Inspector to come to his apiary he has got to go there whether he is in the northern or southern part of the state.

Mr. Pyles—Other work must not be neglected, because the rest of the state will complain if we neglect them.

Mr. Kildow—Of course if we knew everything to start with this world would stand still because we would have it done in one year, but we have to live and learn as we go along; we will learn these better ways and of these better things, and that is why we have not been perfect before.

President Baxter—We are not blaming the Inspector at all, but trying to help him along in devising means to do more efficient work.

Mr. Kildow—A good many bee-keepers will want you to come up to their apiary but will want you to leave as soon as you get through, and don't want to help you to get to the other fellow, while others will take you around from place to place.

They are both classes, but, if all the bee-keepers would help us all they possibly can, it would help us out a good deal.

Mr. Root—In our state we find that where we can get volunteer automobiles it facilitates the work very much.

It struck me, with the fund you have got, the state could extend this work of inspection with a Ford automobile. I believe it is the best machine for this kind of work. You could cover an immense amount of territory.

In our county I take my machine and in two days we have every bee-keeper's place visited.

I told the box hive men if they would put their bees in modern hives, I would help bear the expense.

Mr. Kildow—Our committee men do not recommend the use of automobiles. They do not want the deputies to hire automobiles and livery hire.

Mr. Root—My thought was—and in our state we are advocating that the Inspector, the Chief Inspector be furnished with a machine—with a Ford at $340.00. Why, a man can buy a good Ford at $250. If the Inspector knows anything about machines he can double and treble his work.

Mr. Kildow—Another plan: In the Fox River Valley, at Aurora, they have perfected a little Association—they had 20 members last lear.

They sent me word this summer—"Can you come up here? We meet on such and such a night. Let us know if you can come and we can arrange for you while you are here. We will have different parties to take you out."

Well, we covered lots of territory and got a good deal of work done because they put their shoulder to the wheel and helped each other.

President Baxter—In most every community you can find the same help.

Mr. Kildow—If others would pattern after this, it would be a great help.

Mr. Wheeler—As I understand it, these automobiles are volunteer automobiles.

Mr. Root—Yes, those in Aurora were.

Where we find these things so nicely arranged for us, we can do so much more work; when we have the moral support of the best people in the community, the Inspector is able to do much more work than if he has antagonism all the time.

In cases of this kind I think that the Association can do a great deal of work. If the Association would authorize the secretary, when he is writing cards, or sending out letters, to say that any assistance given to the Inspector or his deputies will advance the work of bee-keeping and inspection work in the state, I think this would be an excellent thing.

Mr. Stone—We can send this request out without any cost except for the printing. We sent out a thousand solicitations for membership in December. This could be done without any extra expense.

If you will get the form up we will have it printed and sent out, if that is the voice of the meeting.

President Baxter—I think it would be a good idea.

Mr. Dadant—In accordance with your request, the Resolution Committee offers the following Resolution:

Resolution.

Resolved, That the Illinois State Bee-Keepers' Association recommend that the card system be adopted in the inspection of bees within the state and that the bees in the counties which contain the largest amount of disease be thoroughly examined and treated, aiming to treat several counties together within a certain area, until the entire state is cleaned up.

C. P. DADANT,
A. L. KILDOW,
AARON COPPIN.

Motion was made, seconded and carried that this Resolution be adopted.

President Baxter—Our next number is, "Selling Honey," by N. E. France. Have you his paper?

Mr. Stone—He failed to send a paper. I looked for him until this morning and had hopes he would be here today. He did not send it—but, Mr. President, I will put in this report the letter from Mr. Hawkins.

Mr. Hawkins refers his report to Dr. Baxter, and I will ask Dr. Baxter to read his letter:

To the members of the Illinois State Bee-Keepers' Association, assembled, Greeting:

At the 1915 meet, I was named Chairman of a Committee to further knowledge of bee-keeping in the Public Schools of the state. I am glad to report the following progress:

After considerable correspondence with the Hon. Mr. Blair, it appeared that a good method of accomplishing the purpose of my instructions from the association was to prepare a paper. This paper Mr. Blair agreed to incorporate in the annual Bird and Arbor Day Book, a free publication of the Illinois Department of Public Instruction, which is sent early each spring to every teacher of natural science in Illinois, for their use under instructions from the State Superintendent of Instruction. It is also available to all other teachers without cost, for the asking.

Because of season work, Mr. Dadant, with whom I conferred in the matter, suggested getting up the paper this winter. This is being done, and, before the paper goes to the State Educational office as printers' copy, I shall submit to Mr. C. P. Dadant, for suggestions, and the members of my committee, for approbation.

This course I hope meets with your approval and is the easiest way of accomplishing our ends with a minimum of time expenditure.

The names of the committee are not given here since my records in the matter are in Illinois and I only remember Dr. Baxter was a member.

They will pardon this, I am sure.

Any suggestions from the Association will be received gratefully.

(Signed) Kennith Hawkins.

President Baxter—You have heard the report, what is your pleasure?

A member—I move the report be received and the committee be continued with change of one member as made necessary.

Motion seconded and carried.

President Baxter—Dr. Baxter, Chairman; Mr. King is another member—and for the third member?

Dr. Baxter—In appointing this committee; I understood I was to continue as the Chairman of the committee of the State Fair Building Exhibit. I am willing to work, but I do not want to try to do it all; it cannot be done.

I would rather you would put on some other man as Chairman of that committee.

President Baxter—I will do that.

Mr. Pyles—As I understood the motion, it was that this committee be continued.

Mr. Dadant—Mr. Hawkins resigns; he was Chairman.

President Baxter—We will take that under advisement; I will appoint the Chairman later.

President Baxter—The next number on the program this morning is the paper of Mr. Dadant.

Mr. Dadant—Before I speak on this subject I find that, although we offered premiums of $5.00, $4.00, $3.00, $2.00 and $1.00 for essays, there have been no essays forwarded. Have there, Mr. Secretary?

Mr. Stone—No, sir, not so far.

Mr. Dadant—I just found out I have two essays, one inside of the other, and so I think it looks pretty bad for

the Illinois State Bee-Keepers' Association, with its 800 members, not to produce an essay for the prizes offered.

I will offer to compete, and, being the only man to compete, I will surely win.

I will offer it to our Secretary.

Mr. Stone—The title of the paper:

FIELD MEETS, ASSOCIATIONS AND CO-OPERATION.

Prize essay by Mr. C. P. Dadant.

Fifty years ago meetings of bee-keepers were rare events and it was out of the question to gather together more than a half dozen in one place. Bee-keeping by modern methods was just beginning. The growth of the business was rapid, but sporadic. Illinois for a long time could not gather in one spot more than half a dozen persons interested in bees, until bee-men of several states were drawn together at Chicago. In good seasons, however, large numbers of bee-keepers became interested, but only temporarly. For instance, the Western Illinois and Eastern Iowa Association, organized in the seventies, brought together 105 members in May, 1879, at Hamilton. Two successive good seasons were the reason of it. But within 3 years that prosperous association disappeared.

Something more stable was secured when the bee-keepers obtained recognition from some of the state legislatures. Perhaps foul brood is to be thanked for forcing this. The existence of the disease compelled honey producers to get together for mutual protection. Now not only the legislatures but the colleges are beginning to recognize the needs of bee-keping.

Field meets are a modern idea. Yet nothing better could be thought of because often these meetings are held in the apiaries, where methods and implements of individual leaders may be displayed and explained.

But the most important need of bee-keepers, co-operation, is yet in the future. Co-operation is successful in very few places, but this local success is sufficient to indicate its value. The Colorado Honey Producers' Association, which is not merely an association, but a stock company, is as good a model as may be found. It is not the only one in existence in this country but it is the most successful and the longest established.

Foreign countries can show some very good organizations. The bee-keepers of Switzerland, who count among their numbers very few specialists, are yet well organized. The two Associations in that progressive republic have together a membership of over 11,000. Their principal aim is to protect their members against losses by disease among their bees, floods and avalanches, so common in Switzerland. They manage to indemnify their members for all losses with a tax of one cent per colony of bees.

The principal losses which they have to cover are those from foul brood, which was very prevalent until a thorough organization, with state help, created systematic inspection and treatment.

In Italy, a stock company, organized for the sale of honey and beeswax, has been in existence for twelve years, and has handled millions of pounds of bee produce. Although national in scope, its influence is, so far, only local in results. But the prospect of such an organization is immense, provided it be well managed.

All successful co-operative organizations need a capital stock, to which the members subscribe and which gives them a personal pecuniary interest in the success of the Association.

Above all, these companies need good, stable, conservative management. The idea of co-operation is valuable, but the business may be readily overdone. I can give an instance of failure through too great enthusiasm in a co-operative grocery which organized and failed within the past few years in our immediate vicinity.

This co-operative grocery was organized among consumers, both farmers and city people, with shares of stock at $20 each, for the purpose of saving the middleman's profit and supplying groceries at cost. The capital stock of $20,000 was promptly subscribed and paid in. But the management got over-confident. They bought sppplies on a large scale, and they were so eager to crush the retailers' opposition that they sold goods at a less price than the original purchase price and the cost of handling added. The result was prompt. They were compelled to shrink their business,

confidence was lost, and in a very short space of time they had to close their doors.

Yet there is a great advantage in co-operation where the members of such an association do not expect too much from their union and where the management is in the hands of competent, careful and conservative men.

The attempt made to organize our National Association on co-operative lines failed for a number of reasons. But to my mind the principal cause of failure was the difficulty of establishing such a business, in as large a country as ours, without capital, from the center or the head, without previous local organizations.

When this attempt was made. I visited the manager of the Colorado Honey Producers and asked him to join us. His reply was, "Your association can do us no good because it is too insufficiently organized for so large a scale as it proposes to extend. We would have nothing to gain and probably quite a little expense in joining hands with you. Whenever you succeed in getting up a number of co-operative associations like ours, then and only will it be advisable for us to join hands with you. Until then we would do you no good and would injure our prospect in trying to co-operate with unestablished organizations.

I do not know that I have given the exact words of the conversation, but the meaning is well described in the above quotation.

Since that time, and in view of present conditions, I have come to the conclusion that, in order to succeed with national co-operation, we must first organize local societies. This will be slow, because there are many chances of failure and because the average man has not yet grasped the full possibilities of a union of forces, even though our country itself is organized politically on such a principle. But we must bear in mind that success is possible by union and interchange of ideas.

The worst feature of individualism, in bee-keeping, lies in the difficulty of controlling prices. The little producer, he who only occasionally has honey for sale, is the man who forces prices down. He does not even think of consulting other producers as to the prices he should expect. He takes his honey to market and sells it for whatever the retailer sees fit to offer. Some of these little producers even go so far as to inquire into the price at which the large producer holds his crop and purposely undersell him in order to get rid of his honey.

Mr. Dadant—I would like to suggest also that a very good subject for an essay, and a very live man to make it—is the subject under discussion last evening—and the man is Dr. Baxter.

Dr. Baxter gave us some explanations last evening, that to me were very clear.

He criticized some of our fool ideas about honey, but he gave us the truth.

I suggest we get Dr. Baxter to write us an essay on that which he told us last evening, about dextrose and laevulos.

Mr. Root—The statement made by Dr. Baxter was the best and clearest for a layman I have ever heard. I think if we could have that in the form of an essay it would do a lot of good. And I propose it be put in the American Bee Journal, and we will then have two essays.

Mr. Stone—Mr. Dadant, it will make your essay come second.

Mr. Dadant—I have a paper, but with your permission I will not read it, I will say what I have to say from memory.

Dr Baxter was voted 1st prize on his essay, and C. P. Dadant was voted 2d.

The Prevention of Swarming.

By C. P. Dadant.

There are many methods for the prevention of swarming, but they are nearly all by manipulations which require a great deal of time at the busiest season. The method which we sustain as the best and which I propose to describe requires no active manipulations during the honey-gathering period, outside of supplying the colony with ample supers and is what might properly be called a "let-alone" method.

As early as 1870, we found ourselves with a sufficient number of colonies to make swarming undesirable. Besides the objectionable increase in numbers, natural swarming caused an increase of labor, when we were busiest. The method which we adopted then has been in constant use ever since, with

additional improvements. As to its success, the past season is ample evidence. Out of about 525 colonies, spring count, we gathered less than 30 swarms, but harvested over 200 pounds of honey per colony, while a neighbor of ours gathered 12 swarms from 5 colonies, owing to his neglect of proper attendance to their needs. The requirements are as follows:

1. An ample brood-chamber for the needs of the colony. If the queen is prolific and finds herself confined to a scanty lower story by queen-excluders or otherwise, she will make it known to the bees or they will instantly notice it and prepare queen-cells.

As an outcome of this first proposition, there must be ample room for stores. Some novices are astonished to read of old practitioners like Dr. Miller placing as many as 3 supers at once over a strong colony. But if the queen is very prolific, and has been breeding plentifully as nature dictates, her colony may be able to work in each of two supers as strongly as they would work in one. Dr. Miller uses two 8-frame brood-chambers previous to the honey crop, when the queen is prolific. She can thus develop her fertility to the greatest extent.

2. The use of coomb foundation in full sheets in the supers when working for comb honey, or of full combs in extracting supers, has also a great effect on the prevention of swarming. True, swarming is much less likely to occur when supers are given of fully built combs, but comb foundation also helps greatly. There are days when the crop is so heavy that all the available cells are filled with fresh nectar. If the bees have to build more comb, and thus find themselves crowded for room to deposit their loads, swarming may ensue. But, with full sheets of foundation in every section, the labor of building additional comb and producing sufficient wax for it is much reduced. The supers must also be placed upon the colonies before they have become crowded for space, or they would readily get the swarming impulse which is next to impossible to overcome by any manipulations when once the bees have acquired it.

3. It will be entirely useless to expect the bees to remain contented and fill the supers, if the ventilation of the hive is not adequate to the requirements of the enlarged population. All observers have noticed the great tax imposed upon them by the simultaneous increase of heat brought about by a summer temperature and a daily addition of some 3,000 or 4,000 workers hatching in populous colonies. Thousands of colonies are compelled to leave a part of their population idle, hanging on the outside of the hive for days and sometimes for weeks, because they are unable to sufficiently ventilate the inside of the brood-chamber and supers. We raise our hives up from the bottom-board from a half inch to 2 inches, when there is a likelihood of the bees being unable to remain inside. We have even set the supers back a half inch or so for a short time, so as to have a current of air through the front of the brood-chamber in very hot weather. This, however, must not be continued too long. But the bottom ventilation must be ample, ample enough, in fact, to allow all the bees to work, so that none remain clustering on the outside during the continuation of the honey crop.

4. As help to ventilation, by decreasing the heat, a good roof is needed when the hives are exposed to the sun. We use coarse roofs on our hives at all times. These are made of large discarded dry goods boxes and are flat. They are cleated with a 2 inch scantling across the rear underside and a 1 inch scantling in front. This secures a slope of an inch from rear to front. These roofs are also useful in sheltering the hive tops from the effects of the weather and help to preserve them in good condition.

5. The queens must be young. Some bee-keepers believe in re-queening every season after the honey crop. I do not believe in so radical a measure. I believe a qeen in her second year is fully as good as in her first season. But, if she has proven inferior, she should be superseded. Old queens which are losing their fertility during the busy season are a frequent cause of swarming. The workers prepare to supersede them by raising queen-cells, and the old queen, in a pique, leaves with the swarm. So we must see that our old queens are replaced in the fall, or late summer.

6. A large number of drones is an incentive to swarming. Some of the old-time bee-keepers thought the drones

were beneficial because the colonies having many drones swarmed readily. Swarming was then considered a desirable thing, since dividing or artificial increase was not thought of. The excess of drones does indeed promote swarming. Those big, noisy fellows remain in the hive, in the way, all day long, except for a flight during the warmest hours, being then still more in the way of the active workers. No doubt, as Dr. Brunnich says, there is a certain fondness for the drones or males, on the part of the workers, during the crop, which changes to hate when the crop is ended, and they consume the hard-earned stores. But they are at all times much in their way. In a state of nature, according to the best authorities, the bees build from one-seventh to one-tenth of their combs of drone size, in the brood-chamber. If only one-twentieth of the combs of a normal colony were filled with drone brood, this would still supply nearly 2,500 drones per colony. We should permit only our very best colonies. and only two or three of these, to raise such a large number of males, as 5,000 to 10,000 drones are ample for any apiary. The other colonies may be deprived of their drones as nearly as possible. for it is probably impossible to entirely prevent the rearing of any drones. But from 100 to 300 of these useless consumers per colony will be of small importance. It is not only necessary to remove the drone-comb, early in the season, it is also indispensable to replace it with worker comb at once, for the bees will almost invariably replace drone comb in the same spot, if left to their own ways.

It has often been stated that bees will tear down worker comb to build drone comb. This, I believe, is an error of observation. Four different experiments, to my knowledge, have tried the hiving of swarms on a hive full of drone comb. In each of these instances the bees have followed the same method. After some hesitancy, they did not tear down the comb to rebuild it, as might have been expected, but simply narrowed the mouth of the cells to worker size, and the queen laid worker eggs in them. Is it not probable that, if the bees were prone to tear down one kind of comb to rebuild in another, they would have done it in these four cases? The names of the experimenters who tried this are T. W. Cowan, editor of the British Bee Journal; E. Drory, of Bordeaux, former editor of the Rucher Du Sud-Ouest: Dr. Brunnich, of Switzerland, and myself.

There are instances, however, of bees building drone comb on worker foundation. They are rare, and are usually due to some defect of the foundation, which may have been stretched accidentally in the laminating, so as to widen the cells. Mr. Crane, of Vermont, mentioned to me having had a dozen sheets of foundation thus changed out of some 2,000 sheets of this material during the past summer. These are only accidents.

When we replace the drone comb with worker comb, we do away with undesirable drones, for the mating of the queens. We save food which would otherwise be wasted, since the drone costs at least one-half more to rear than the worker, and has to be fed as long as he lives. Beheading drones in the breeding cells is a waste, for the queen will again lay drone eggs in those cells. But the worst method of drone prevention is the using of drone traps, which hinder the workers more than the drones would. Replace your drone combs with worker combs in the brood chamber early in the season, or let the drones alone, after they have been reared.

7. The seventh and last of what I consider the requirements for the prevention of swarming is the spacing of the frames of the brood chamber 1½ inches from center to center, instead of the usual spacing of 1⅜ inches. The bees work as satisfactorily in combs spaced 1½ inches as in those with the narrower spacing. But there is a greater comfort for them in the wider spacing, which adds a total of about 160 cubic inches to the narrow breathing and habitable space of an 8-frame brood chamber. Think of the large number of bees which may be accommodated in such a space.

The standard hives of the present day are nearly all of the narrower kind. Nevertheless, the broader spacing is much the better, both for prevention of swarming and for clustering in the winter, since more bees can hang between the brood combs. My attention was called to the former advantage during the past summer, by Mr. Allen

Latham, of Connecticut, one of the most observing kee-keepers I have ever met. We have used the wider spacing for years, as more convenient, without realizing until lately that it was one of the causes of our success in avoiding swarming.

Let it not be understood by any one that I lay claims to the total prevention of swarming. That is impossible. But when I see practical bee-keepers, such as I met the past summer in the vicinity of Syracuse, report as many as 18 swarms out, in one apiary, at one time, I feel that there is a general need for more thorough understanding of the usual causes of natural swarming.

I am asked whether we have a non-swarming breed of bees. No, neither do I think we can ever get a really non-swarming race, if they are placed in circumstances that will induce their natural propensity to become developed.

The advantages of the above method are the doing away with hive manipulations during the honey crop, such as cutting out queen-cells, taking out brood, shifting stories, etc. All the required work, outside of increasing the ventilation and adding supers, has to be done during the dull season. I know that those who have excessive swarming, who will try this method, will find themselves greatly relieved by the results.

Mr. Root—This is one of the most interesting discussions I have heard for a long time.

You perhaps have seen in the edition of the A, B, C, issue of 25 years ago, that I was very much interested in his method of the Prevention of Swarming. I incorporated that under the subject of Dadant hive. The statement is there made that Dadants have only a small percentage of swarming. I have kept that in every edition, and it is going to stay there.

Now, in regard to the spacing of the frames of the brood chamber of 1½ inches from center to center instead of the usual spacing of 1⅜ inches. In regard to the spacing of the frames, I may as well plead guilty. I have to plead guilty to a good many things.

In this particular case, I will give you a little history, and I might as well make a confession:

Unfortunately, in this particular instance, I happened to occupy an interest where I controlled the spacing of frames. In the early history of modern bee supply business I got interested in fixed frames. I got interested in Quimby fixed frames, and they were fixed frames, without any doubt.

In 1890, I went on a bicycle, the first almost then known, through the Mohawk Valley, and visited Quimby's old home, the locality where this large hive was in use, where the wide spacing was used generally.

Mr. L. Root argued with me the use of this broader spacing used by Dadant's, and I became convinced that it was all right.

When we introduced the Hoffman frame, after a great deal of discussion and correspondence with a good many bee-keepers, we decided on a distance of 1⅜ inch. The discussion and consensus of opinion of a majority of bee-keepers at the time was in favor of 1⅜ inch.

I took the matter up then with Dr. Miller, and consulted several of the foreign works. The majority of opinion seemed to be for 1⅜ inches, and not one of them suggested the point brought up of non-swarming. The main reason given for the 1⅜ inch was there would be less drone combs because drone brood required more room.

Mr. Kildow—Was it not then suggested that 1⅜ inch spacing would stop so much honey along the top of the frame?

Mr. Root—That was one of the points—reduction of drone brood, more honey in the supers; and some adopted spacing little less than 1⅜ inch from center to center.

The A. I. Root Company decided in favor of 1⅜ inch and subsequently the Hoffman frames were adopted by Mr. Lewis and Mr. Faulkner.

Summing up what Mr. Dadant has said, I believe he is right, and if he is right what are the rest of us going to do?

Mr. Dadant—I don't care.

Mr. Root—Here is what you can do: We will say the Hoffman frame, I presume, is the standard, 1⅜. If you space that 1½ from center to center, you are going to have a line of bee glue of the worst kind. If you nail a strip 1-16th inch on one side and

1-16th on the other, you are going to have a mess. If you are going to run for extracted honey, however, I would do as they do in the west, and space the Hoffman frame 1¾ inch from center to center. That is being used very largely in the west, but the majority of bee-keepers in the country are using 1⅜ inches.

I think this is an important discussion. You know how thoroughly we are entrenched in our ways.

I remember that Dr. Miller advised an 8 frame hive was better than a 10 frame hive, and we followed that advice. Now we have changed over to the 10, and some bee-keepers are talking 12. Mr. Holtermann says you could not give him less than 12 frame hive.

But if you have noticed in the correspondence that I have had, and the questions I have answered, I have said to a great many bee-keepers in Texas: "If I were going to run for extracted honey, I should adopt the 10 frame, Jumbo hive."

I believe Mr. Dadant, if he were to start anew with his hives, possibly would adopt a hive with the top the same size as the 10 frame Langstroth, making it deeper and wider.

I believe Dadants are the only people in this country, and I think, perhaps, in the world, who keep down swarming.

We have got to remember that in the production of extracted honey.

Mr. Kildow—In my very earliest bee-keeping, I adopted a hive in our neighborhood—don't know what you call it; it was closed in frame 1½ inches wide; the back end of the frame, I think, was about 10 inches deep and slanted to the front about 1¼ inch longer.

About the time Gleanings came out and advocated the 1⅜ inch spacing, I got it into my head there was too much honey above the brood. The brood would come up within 1½ inch or 2 inches, and swell out that honey. I got it in my head that ought not to be there to get a good section of honey, so I cut my frames down to 1⅜ inch from center to center. A neighbor of mine north of me has his frames 1½ inches, and he has as much swarming as any man living.

Mr. Dadant—That is not the only condition.

President Baxter—There are seven different conditions, and all must be used at the same time.

Mr. Kildow—Whether I helped it in cutting down to 1⅜ inch I do not know. I have very good success.

Mr. Root—Confirming what Mr. Dadant has said:

We had several colonies of Carnolians, and ran them for comb honey. I could not do anything with them. The ordinary rules to prevent swarming did not work in their case. I had one colony swarm five or six times, and our boys gave it up in disgust. I said I would never have Carnolians again.

I am afraid Mr. Dadant is right in what he has said, and if he is it is going to be up to some of us to go a little farther.

There are really eight conditions, Mr. Dadant. You said there were seven conditions.

Mr. Dadant—The room above and below I count as one. I want to call your attention to one thing in this system: I have not said any one of those conditions would prevent swarming, but I say it tends to prevent swarming. The proof of the pudding is in the eating.

In over 525 colonies, we only had about thirty swarms.

Mr. Kildow—I would like to see you run that for comb honey.

Mr. Dadant—If you wish to prevent swarming and follow these conditions, it will work out: Plenty of room, plenty of ventilation, plenty of shade, and spacing, all have influence upon it. The swarming impulse is next to impossible to overcome by any manipulation when once the bees have acquired it. It is very important to have proper ventilation, because the bees will not remain contented and fill the supers if the ventilation of the hive is not adequate. Plenty of ventilation, plenty of room.

I agree with you, it is a difficult question to settle when you have 8 frame hives. But that is not my funeral; I have told you what I have found out. I know what has been our experience, from my own knowledge.

If any of you get acquainted with Mr. Latham, you will recognize he is a practical man. He is always experimenting, so was my father. My father tried 18 inch frame, regular barn doors. It was an experiment, to see whether

it would be better. Those men who are always trying something are the men who find out things.

Mr. Pyles—You know, as I was saying this forenoon, everybody likes their own baby, and some people adopt babies, and like them.

We have a sectional hive, peculiarly built, for our own individual use. I don't care whether you like my hive or not; it suits me. That is 1⅜ spacing, by dropping out one frame.

Mr. Root—I am in possession of information, and I see Mr. Dadant is in possession of the same thing: There is a vast amount of comb honey being produced this year. If one-third of the comb honey that is now on the market was in the form of extracted, with reduction in the cost to produce it, it would be better for the bee-keeper. Today it is a hard matter to buy extracted honey at almost any price.

I think the time is coming, before next year, when the markets will be cleaned of extracted honey, and I do not know what the bottlers are going to do.

You men who are thinking about the swarming problem—and Mr. Dadant, who is all prepared for extracted—the question is, whether next year you will not want to prepare for that in advance if the trade is running for extracted. You can reduce your swarming according to Mr. Dadant's plan.

I wish Mr. Dadant would run for comb honey for a little while.

President Baxter—I have.

Mr. Root—I would like to know how this works out, with those seven principles?

Mr. Dadant—You who raise comb honey, and then your bees will swarm, do you recognize or not the principles I have advocated for the prevention of swarming? If you do, I have won my point.

I am not proposing to give you a method by which you can prevent swarming, but one that will tend to prevent swarming. It is self-evident that these points are necessary to prevent swarming as much as possible, and I have not only my experience, but the authority of that man Latham, who is really authority. The better I got acquainted with him, the more I thought of him as a capital bee-keeper.

It is no doubt that plenty of ventilation, ample brood chamber for the needs of the colony, use of comb foundation in full sheets in the supers when working for comb honey, or of full combs in extracting, young queens, replace the drone comb with worker comb, 1½ inch spacing, are preventers of swarming—not altogether, and not so much so in raising comb honey, but there is no doubt, if you follow those principles, you will get nearer to the goal you are seeking, the prevention of swarming.

When I see practical bee-keepers, such as I met last summer in the vicinity of Syracuse, New York, report as many as eighteen swarms out, in one apiary, at one time, I felt that something was needed to be done. You may have a great many swarms, but, if you follow the better methods, you will have less swarms in the raising of comb honey. I never had that many swarms in the worst times with us.

Someone spoke about Mr. Holtermann. He uses 12 and 13 frame Langstroth hives. Holtermann was one of our pupils, but he did not want to take that large frame.

If you are going to use a large hive, I don't want to say to you, use the hive we are using, because we never succeed in getting any one to use it. When a man comes to us and wants hives, I never offer him those Dadant hives; they are too expensive. I know I succeed, and I tell him how, and, if you can overthrow my argument, do so.

You will have some swarms if you raise comb honey, but you won't have so many if you follow my instructions as I follow them.

We have proved it a success, as was evidenced this past season. Out of about 525 colonies, spring count, less than 30 swarms were gathered. We harvested over 200 pounds of honey per colony. Twelve swarms were gathered by a neighboor of ours from five colonies. He neglected their needs.

Mr. Kildow—I do not think the 1½ inch spacing makes so much difference.

Mr. Dadant—Eight frames gives you 162 cubic inches additional for the bees to cluster in; one full inch for the entire hive. Figure for yourselves; 162 cubic inches additional for the bees to cluster in.

If one certain spacing is acceptable to the bees, that spacing is all right if it is more suitable for you. You are the ones that manipulate the hives, and, if the bees accept your spacing, choose the one that is best.

Mr. Dadant—The question of process is sure. Whether you follow it or not, you have got to listen to the arguments.

With an 8 or 10 frame hive you have not got enough space in the whole hive for a good prolific queen. The queens don't have room enough below. This queen excluder that you put on is another promoter of swarming. Whenever you put something that hinders the bees from traveling back and forth will promote swarming.

President Baxter—I want to second all that Mr. Dadant has said. I have tried it for the past thirty years, and, as the saying is, "The proof of the pudding is in the eating." I have eaten it, and know what it is. I have followed their methods; I have been successful. I have tried the Langstroth hive, and most everything I ever heard of, and I have come down to the Quimby hive, just as Mr. Dadant is using today.

I remember in the eighties, I think it was the spring of 1881, my father-in-law, Mr. Charles Dadant, made some large Jumbo hives. They were chaff hives, about 3 inches of chaff all around, and about that much on the bottom, too. The bottoms were stationary. I have used those hives ever since that time, and those hives always give me more swarms than any other hive on the place.

Mr. Dadant saw himself that they were promoters of swarming. He came to my house and bored three holes in the front of those hives. Mr. Dadant did that in 1881; three holes. To prevent the chaff from going out, he put tin tubes in those holes. I opened all three of those veins to give them air. That didn't prevent them from clustering out. I put the super back, gave them ½ inch spacing on top of the frames, and that worked admirably.

I had all those hives cut down, the chaff bottoms taken out, a movable bottom made for those hives, and had no more swarms in those than any others.

These seven points I consider very essential; but you must combine them all.

As soon as I find I have a strong colony, I give them a little ventilation. The bottom ventilation must be enough to allow all the bees to work.

As soon as I see they are beginning to get pretty well crowded in the brood chamber, on goes a super. I have had built up as high as five supers on one hive.

I believe in manipulation in the early part of the season. After that, there is very little manipulation done.

This year I lost the only hand that could work with the bees, and had to do everything myself, such as putting on supers, et cetera, et cetera. What is the result?

During June I had to harvest a large crop of strawberries and market them myself. In addition to that, I had to spray my vineyard of fifteen acres, spray my orchard, and the result was, I sold over 1,800 dollars worth of honey out of 130 colonies, spring count. I had less than 12 natural swarms, and attended to my other work besides. I neglected nothing to the point that it was a loss to me.

And, in taking care and securing this $1,800 worth of honey, I had less than $100 expense.

I could not have done that with any other hive or any other method of treatment. I know that this is a good thing and that it will bring results. I do it year after year.

Now, then, location has a good deal to do, also. I have not the best location in the world, but more depends upon the bee-keeper. I don't care in what location he is, you may have the best location in the world, if he is not a man up to his business and knows how to take advantage of conditions, he is not going to succeed in bee-keeping or anything else.

Mr. Dadant—I don't mean to say, as I said before, that we have given you an entire cure for the prevention of swarming. Undoubtedly there are conditions that will cause swarming more than others; but that does not deter from the arguments given. We are all working under certain conditions, and, if certain methods succeed better than others under those conditions, let us follow them. There are differences in conditions that cause swarming; there

are weather conditions, natural conditions.

Mr. Kildow—I should think there ought to be just one more thing added to those seven rules—the season.

About 1903, I think, somewhere in there, we had a year where the bees were flying all over the country. I attribute that to the fact that there was just enough honey coming in to aggravate the bees.

When we have the flow coming in nice and good, it seems to put the swarming notion out of their head.

This year everything goes crooked. They will swarm without a particle of reason; they lose all sense and pile out. We have lost more queens this year, I believe, by going out and leaving the hive queenless than I ever did in any ten or twelve years of my life before. Everything has gone wrong this year.

President Baxter—I cannot say so; I have increased from 130 to 165, but mostly by divisions; artificial swarms. I have had less loss of queens this year than in many years.

This fall I only found one colony queenless when I prepared for the winter, although I took no precaution in looking them over this fall.

Mr. Kildow—In our locality, while we had an abundance of clover, I never saw so much clover with so little honey in it.

President Baxter—Mr. Dadant cautioned us about shade, to decrease the heat; that he uses a good roof when the hives are exposed to the sun.

I think the best way poossible to protect the hives is to use some wooden covers. This protection of board sheets made from old store boxes is very good. I also like young trees, and not too thick. It is well to have the sunlight, and shade them with artificial shade.

Mr. Root—Some one spoke about a moderate honey flow starting up breeding. Mr. Kildow, I believe.

In Texas, and throughout the south, in the early part of the season, the honey flow is very light, and breeding gets up to its highest pitch, and swarming is furious. As the honey flow comes on, the swarming stops.

Reports have shown the same condition applies in the north when those conditions are common, but in the north those conditions are not so prevailing. There is no difference in Texas, in Ohio or in Indiana or Illinois, or any other state, providing conditions are the same, the bees will do the same thing, and when there is a heavy honey flow it has a tendency to check swarming.

President Baxter—The next thing in order will be the election of officers for 1917.

President Baxter—The first in order will be the nomination for President for the next term. Whom will you place in nomination?

Mr. Stone—I nominate Mr. Emil Baxter.

A Member—I nominate Mr. C. P. Dadant.

Mr. Dadant—I prefer not to serve; I decline. The reason I prefer not to serve, I think I can do more good by not being President. I have been President of the National, and I feel it is really better for me to stay out of office.

Mr. Stone—I think we can use Mr. Dadant better than by being President.

Mr. Kildow—There appears to be no other nominee. I move that the Secretary cast the ballot of this Association for Mr. Emil J. Baxter as President for 1917.

Motion seconded.

Mr. Kildow—It has been moved and seconded that Mr. Emil J. Baxter be our President for 1917. All in favor, say Aye; contrary minded, No.

Motion carried, and the Secretary cast the ballot of the Association for Mr. Emil J. Baxter for President, 1917.

President Baxter—Ladies and gentlemen, I thank you very much. I would prefer to see some one else in the chair the coming year. I do not know that I can serve you. I would like to serve you. I have done my best this past year, and have been very busy, and I may not be in Illinois all of this coming year, as I expect to go west, and probably be traveling through the west the greater part of the year, and in that case the Vice-President will have to take the office.

Mr. Stone—We want, for our First Vice-President, Dr. A. C. Baxter, of Springfield.

Mr. Dadant—I request that the

names of the five Vice-Presidents who are now in office be given:

Aaron Coppin.
Dr. A. C. Baxter.
A. L. Kildow.
J. W. Boowen.
Kennith Hawkins.

(Kennith Hawkins refuses to be Vice-President another term).

Mr. Dadant—I move that we proceed with the ballot for the five Vice-Presidents.

Motion seconded and carried.

President Baxter—I will appoint on the committee for the use of honey in homes and to be brought before the public schools: Messrs. King, Dr. Baxter and Williams.

I will appoint on the committee on the Revision of the Premium List: Messrs. Dr. Baxter, J. A. Stone, and E. J. Baxter.

I will appoint on the State Fair Committee: Dr. Baxter, Messrs. Withrow, Kildow and Pyles.

The Building Committee to remain as it was before: Dr. Baxter, Messrs. Kildow and Coppin.

The Resolution Committee: Messrs. Dadant, Coppin, and Kildow.

President Baxter—We now have the report of the tellers:

First Vice-President, Dr. Baxter; Second Vice-President, Mr. Williams; Third Vice-President, Mr. Coppin; Fourth Vice-President, Mr. Heinzel; Fifth Vice-President, Mr. Withrow.

President Baxter—The name of James A. Stone is nominated for Secretary. I hereby cast the ballot of this Association for Mr. James A. Stone for Secretary for the ensuing year.

Mr. Stone—I move we cast the ballot of the Association for Mr. Becker, and that the Secretary be instructed to cast the ballot of this Association for Mr. Becker for Treasurer.

Motion seconded and carried.

President Baxter—Before we adjourn there is another matter we want to take care of, and that is in regard to offering medals for exhibits of honey here at our next annual meeting. What is your pleasure in the matter?

How many of you think it would be a good proposition?

President Baxter—Are we prepared to have any exhibits of honey here at our meeting? Do you think it would be an attraction and for the good of the bee-keepers present? That is for you to decide.

The question of offering medals for honey for our annual meeting is before the house.

Mr. Coppin—I make a motion we have it; I think it would be of interest.

President Baxter—To what extent? Like they have in Michigan?

President Baxter—They have two medals; that is what they have had heretofore. I believe this year they have four or six. If we begin at two, I think it would be enough.

Mr. Dadant—I move the committee be appointed to discuss this subject, with power to act—a committee of three.

Motion seconded and carried.

Mr. Pyles—This question, I think, is of very vital importance. It is a question in my mind whether we wish to turn over the Association to this kind of work, or keep it a matter of education, as we are doing.

It seems to me, as this Convention has been handled, this one has been one of the best we ever had.

I remember that once or twice, here, we have had samples of honey, and the men are so interested in that, and in the contracting of sales, that they want to be talking all the time—it makes no difference who is on the floor—about their honey, and they want to be showing it to some one.

I believe an exhibit will take away the interest from the educational feature of our Conventions. Personally, I would oppose it on that ground.

Mr. Dadant—The question is still open for discussion. I want to say I have been at conventions where they have that feature all the time and premiums on honey.

Take the Quebec Bee-Keepers' French Speaking Association. They have honey, a number of samples from bee-keepers. They have that in a separate room or in the corner of the main room, and no one is permitted to stay with it during sessions.

Between sessions they can discuss it as much as they please.

People are called away from exhibits that do not belong to the discussion at our sessions. That can be done here just as well. I believe it is a good method, and it attracts bee-keepers to

have supplies—and bee-keepers attract bee-keepers. They come to see each other; they are interested in the exhibits, and at the same time in the discussions.

We can make some such rule as that.

A committee can take in some points we are unable to get at here today, if they are given ample time, as they will be before the report is published, they can give us really something that will be more intelligently gotten up than we could get up here today on the spur of the moment.

President Baxter—Anything further on the subject?

I would state, ladies and gentlemen, that the State Horticultural Society for a great many years past have been offering several hundred dollars in premiums for fruit, vegetables and other horticultural matters exhibited at their state meetings. This hall would not begin to show what they had.

When the session is called, the doors are locked, and everybody goes out. During the intermission the exhibit is visited, and the members take note. It is of great benefit as an educational feature. I believe it would be the same with us.

Mr. Williams—Along that same line, for the good I think it would do, I want to tell a little story:

In my town, a man works with me every day that claims he has been a judge at county fairs on honey. Within the last three months he told me he went to Peoria last year to buy some honey, some comb honey; and he said it was no more honey than glucose is honey. He said: "I know positively it was manufactured honey."

Now, if we have a honey exhibit here at our Association, I think it would tend to dispel that thing, the thought among some people that honey is manufactured.

This man said he wanted to buy honey from me because he said he knew that was honey.

Mr. Pyles—As Mr. Dadant states the proposition, I am not opposed to it. I was opposed to it as the motion was made, to have the exhibit here at our annual meeting. I would be opposed to the proposition to have it here.

As Mr. Dadant has stated: I would withdraw any objection I might have.

Dr. Baxter—If we decide to have an exhibit of honey, that means that exhibit cannot be in this building. We will have to move away; our bee-keepers' convention will have to be held at another place. The Secretary of the State or Board of Control of this building will not allow exhibits of this kind to go into the State Capitol, as it makes state buildings to be advertising mediums, advertising certain lines of work—some one man's product. That means you must go to a hotel or have the exhibit in another building, not in the Capitol.

Mr. Stone—Mr. President: Right along that line: There was a time when—I don't know just what kind of an exhibit it was—but they brought grape fruit from Florida; it was on exhibition at the sun parlor at the Leland. It was fine. We might make an arrangement to have it in the sun parlor of the Leland.

President Baxter—All those in favor of the motion, signify it by saying Aye.

President Baxter — The motion is that a committee of three be appointed with full power to act in regard to putting in these medals, or premiums, or not, for exhibitions of honey at our state meetings.

Mr. Bowen—If this committee reports adversely, there will be nothing of the kind?

President Baxter — What is your pleasure? All in favor of the motion as read, signify it by saying Aye.

Motion was carried.

Mr. Dadant—You remember there was a suggestion made by Mr. Root, of Ohio, yesterday, in regard to recommending an appropriation by Congress for the extension of bee culture in the United States and increasing the appropriation from $5,000 to $50,000, which has been promised by one of the committee men in Congress, provided he should return to Congress and was head of that committee again.

Mr. Root desires us to pass a resolution, and the members of the committee propose this resolution:

Resolution.

Resolved, That the Illinois State Bee-Keepers' Association recommend that the $5,000 appropriated by the last Congress, to be expended by the Bureau of Entomology, Washington, D. C.,

for extension work among bee-keepers in the various states, be increased to $50,000.

Under the present Association, only a few men can be sent out. With the larger sum, sufficient men could be sent to do a vast amount of good.

President Baxter—You have heard the purport of this resolution and what is wanted. What is your pleasure?

Mr. Heinzel—I make a motion we adopt this resolution.

Motion seconded and carried.

Mr. Dadant—The south needs this work to be begun down there.

The fact of the matter is that in the south there is very little progressive bee-keeping.

Beeswax comes from people who don't know anything about the actual value of beeswax to their bees; comes from the southern states. I used to wonder why bee-keepers from the south ordered so little stuff. It is in the south that money must be expended for us because it is more needed down there.

We might say that we must have proportionately more than Rhode Island because we are much bigger. I think we should give the education where it is most needed.

In the United States, if each state is going to withdraw because it is not getting its full proportion, we will be in a constant wrangle. And we better separate and be independent states.

Mr. Root—The very purpose of getting this increase is not only to take care of the interests in the south, but in the north.

Mr. Pellet and myself asked for $50,000, to cover the entire United States.

When I got there I saw there was a regime of economy, and they refused to give us anything. As I told you yesterday, I went in there and insisted on getting something, and the very least we could ask for was $5,000.

In view of the very great need of work being done in the south, it was thought best by Dr. Phillips to put that extension work in the south, with the idea that we go back to Congress and ask for $45,000 more, in all, $50,000.

We may not get it, but Dr. Phillips' purpose, as I understand it, is to distribute these men as far as he can over the north as well as the south, and under present conditions he can only cover the places that need it most, that being South Carolina, of which Mr. Lever, chairman of the committee, is a resident.

With the present appropriation of $5,000, the northern states cannot be covered, and but very little of the south. With $50,000, it would cover the whole of the United States.

It is an effort on the part of the federal government to help out the various states.

A Member—I have not heard it explained how this is going to help the bee-keepers of this Association.

President Baxter—Don't you think it will help by improving bee-keeping conditions in the country?

A Member—I don't believe these extension men can help us very much.

President Baxter—We may be some of those extension workers.

President Baxter—This extension work is under a new scheme; it originated under Mr. Roosevelt's administration. It was instituted for the benefit of the south because the south was backward in its agricultural work, and they sent workers through the poorest of the south. The developments have been wonderful where these extension workers have worked.

Then the Page bill was introduced in Congress to increase this extension work, and the Lever's bill succeeded that bill and passed.

We were given extension work in the north here. We got an appropriation of this money, and for so many county advisers in this state. It is no more than just that we should have a portion of this to the bee-keepers.

Mr. Root—The purpose of this particular appropriation is to send out bee experts to enlighten extension workers who are in the field or to be placed in the field. It enlarges the sphere of the Lever law.

When I explained to him that this law could be made more operative by a further appropriation, he was interested.

As soon as the state itself, in the southern states, can raise a small sum of money they will take care of these men. They are now so much in the dark. Some of the finest territory for bees in the United States is in the southeastern part of the United States. There are more bees kept today in that portion of the United States than any

other portion of the United States, and I would not be at all surprised if some of the bee-keepers here in Illinois would not in time like to go south.

But, if those fellows are allowed to scatter American and European foul brood, you won't want to go down there.

The question is, What is your future?

I believe it will be for the benefit of the industry at large.

President Baxter—All those in favor of the motion, signify it by saying Aye.

Motion carried; resolution adopted.

President Baxter—There is to be a committee appointed. I will reserve the names and send them to you.

Question—Who are some of the large bottlers of extracted honey, who buy extracted honey in small and large quantities?

President Baxter—Mr. Root, that question is directed to you.

Mr. Root—Mr. Muth, of Cincinnati. Mr. Weaver, of Cincinnati, is one of the large bottling centers of the United States. Perhaps as much honey in bulk goes to Cincinnati as anywhere in the United States. The Root Company is engaged in bottling; Mr. Bull, of Valparaiso, Indiana; the San Francisco Honey Producers' Association; the A. I. Root Co., of Los Angeles and Philadelphia; the Sioux City Honey Producers' Association, buying large amounts of honey.

I could give you the list of a dozen more if I had come prepared. Two glass factories I heard of yesterday had sold thirty carloads of small glass jars for honey alone; that represents only two of the glass factories. That, in connection with the amount of honey that is going into the trenches, is what is making extracted honey scarce.

This means extracted honey is going up. It also means that those fellows that are bothered with the swarming problem can keep on with extracting, and the other fellows better follow suit.

Question—What make of hive will prevent bridging between the brood chambers and supers?

President Baxter—Mr. Kildow?

Mr. Kildow—The old box hive.

Mr. Coppin—The hive with square top bar, like on the Hoffman, with proper space between that and the super, will prevent it.

Mr. Kildow—What is the proper spacing?

Mr. Coppin—Maybe Mr. Kildow crowds his bees too much, and, if you do that, they will fill up every little crevice.

Mr. Pyles—I will tell you how any hive can be handled: Use enamel cloth, and put the super on top.

Mr. Dadant—We used to use ⅞ inch top bar. As the mill man and the lumber man found lumber more scarce, they made their ⅞ inch thinner; got down very close to ¾; supposed to be ⅞ inch lumber. We found we had more poor combs than ever. We use the loose hanging frame. Those narnow top bars gave us a lot of poor combs. When I took hold of 105 hives, of Langstroth hives, he had 1⅛ inch top bars. I was astonished at the small number of bridges there were between them and the supers.

I concluded if your top bars are thick enough, so that there is about ⅜ inch between the top of the frames, there would be very few bridges.

If you make your toop bars quite wide, leaving enough for free passage of bees, you will have less bridges and bar combs than otherwise. The narrower your top bars will be the more chance there will be for the bees to build up.

Make it not worth their while for them to build in there, and I make them big enough so they can ventilate through it.

Mr. Kildow—I got to racking my head, and made frames 1⅛ inch and almost eliminated poor combs. I told the Root Company I stopped the poor combs, and they wrote me and told me not to crow.

Since then I have found that 1⅛ inch, ½ and ¾ thick was a pretty good preventive, and is as close probably as we will ever get to it.

President Baxter—I want ⅞ inch; I would not have a wide bar for anything.

Mr. Coppin—If you run for comb honey, you would probably change your mind. When we used "V" shaped top bar, the bees did not seem to know where to stop building comb. We would have all kinds of trouble producing comb honey with a square top bar. We are troubled with scarcely

any poor combs; we use the "V" top bar.

Question—Can the pollen in extracting frames be gotten out?

Dr. Baxter—Can the pollen be removed from the frames? (I didn't ask this question).

A Member—It can be gotten out, a little at a time. The easiest thing is to leave it in and put the combs where the bees can use it for brood rearing.

Mr. Pyles—If your combs get very dry and you put them on the hives, the bees will remove it themselves.

Mr. Stone—I would like to have Dr. Baxter answer that question.

Dr. Baxter—I didn't ask that question. The question was asked, "Can pollen be removed from extracted frames?"

After the combs have been thoroughly dried, that is, the bees have cleaned the honey off, what pollen remains, if the pollen is soaked in lukewarm water long enough it can be thrown out by the extractor. It is an endless amount of work, and you are liable to get into some trouble with the water if you have it too warm, but it must be warm water.

If you take cold water, the pollen does not dissolve or mix in water, and it is more tenacious than it was.

And I am like the brother over here: The best plan is to let the bees clean it up. After they have been thoroughly dried, and no honey coming in, the bees will remove most of the pollen. What is left can be removed by the water method.

Mr. Stone—I asked that question.

Mr. France said: "I have soaked extracting combs that had pollen in and threw the pollen out. He did not say how, but Dr. Baxter tells me it could be thrown out by jarring it down if soaked well enough."

He says: "I have soaked combs, and gotten pollen out, and got two crops of honey out of the same frames this season."

President Baxter—I have got several crops out of mine without taking the pollen out. I have taken off 5,000 frames this fall, and I do not believe there was a dozen of them with pollen in. I have never seen any detriment in having pollen in extracted frames —never.

President Baxter—Is there anything to come up before this convention is adjourned? Any business been left undone?

Mr. Root—I wish to offer this suggestion: If the Secretary of this Association will understand (I cannot speak for Mr. Dadant, but I believe he would do the same thing)—

The Journal space is free to you to announce and put in your full program, and you will pick up a good many members that perhaps you might not get otherwise.

I did not get your card, and had to inquire where the Convention was to be held. Possibly, some would see that Mr. So and So is going to speak on such and such a subject, and he would say, "That is a subject I am interested in; I will go to the Convention and hear what he has to say."

Almost every time we come to a Convention we know that we will get some idea that is worth the trip.

President Baxter—Mr. Stone wrote to the President to co-operate with him in forming a program. The President did not get the letter; his housekeeper got the mail out of the box and put it with other papers, and it was mislaid, and I did not come across it until Mr. Stone called my attention to it; otherwise it would have been published in both the American Bee Journal and in Gleanings.

Mr. Root—I offer it as a suggestion, not as criticism.

A Member—I move we adjourn.

Mr. Stone—I move that we pass a resolution of thanks to the custodian for the nice way in which he has treated us. He has done everything he could to please us. I move that a resolution of thanks be extended to him; that the Resolution Committee draft such a resolution.

Motion seconded and carried, and resolution drawn.

Motion to adjourn seconded and carried.

President Baxter—The meeting stands adjourned.

At 1 p. m., the Convention adjourned, to meet at the call of the Executive Committee.

RESIDENCE OF E. J. BAXTER, BUILT FROM THE SALES OF HONEY.

BEE-KEEPING FOR THE FRUIT GROWER.

E. J. BAXTER, NAUVOO.

My subject for today is "Bee-keeping for the Fruit Grower." Bee-keeping is certainly a very interesting as well as a very profitable pursuit when rightly conducted, and as I have been both a bee-keeper and a fruit-grower on rather a large scale for more than forty years, and have made good in both callings, if I may be permitted to use the slang phrase, I can speak to you with the fullest confidence that what I tell you cannot be successfully disputed.

In the past there has been a great deal of antagonism by the fruit growers against the bee-keeper, on the supposition that bees damaged fruits, but, as it has been definitely proven time and again by some of our most careful and renowned experimenters that the honey bee does not primarily damage fruits of any kind, this antagonism is dying out. On the contrary, how many fruit growers are actually hiring bee-keepers to conduct an apiary in or near their orchards or fruit plantations, and why this change in attitude, do you ask? I will tell yoou. Simply because it has been very clearly proven that the honey bee, instead of being a foe to the fruit grower, is one of his very best friends. "The world do move," and we are learning more and more every day. It has been claimed by some scientists, for some time past, and undisputively proven recently by experiments, that the honey bee is one of the chief agencies, if not the chief agency, in the pollenation of our fruits and field crops. One eminent scientist says that there are about sixty species of insects, more or less widely distributed throughout the United States, that help to pollenize our fruits and vegetables, but that the honey bee does more toward that end than the fifty-nine other species all put together. I presume many of you have read of the experiments conducted by the United States Department of Agriculture along these lines, in the State of California some years ago, and how impossible it was to secure a good crop of cherries in territory from which the honey bee had been excluded, whereas before the exclusion of the honey bees the cherry crops were always good, and when the honey bees were brought back the cherry crops again became good.

You have also probably noted the experiments conducted in the apple orchards of Washington and Idaho to determine as near as possible to what extent the honey bee conduced to an increase of crop of perfect fruit. It was shown very clearly that, in the orchards where the honey bees visited the apple bloom very freely, not only was the crop largely increased, but the apples were much more perfect, there being scarcely any gnarled or knotty specimens. The result was that there suddenly sprang up a great demand for honey bees in the Yakima, Wenatchee and other orchard districts of Washington. The results of the experiments in Idaho were identically the same as in Washington. I could add my own experience as to the great value of the honey bee in the pollenation of my fruits, They have added many hundreds of dollars to the value of the crops I have been enabled to harvest through their help. And, my friends, this is not a pipe-dream of mine. It is the actual fact, and has been noted not only by myself, but by the whole community in which I live.

I believe that all are pretty well agreed on the fact that the honey bee is a great wealth producer to our commonwealth through the millions of pounds of honey and beeswax that they produce every year, which would go to waste were it not for them. But, in view of the facts demonstrated, in the pollenation of our fruits and field crops, by the honey bees, who can estimate the millions of dollars derived annually from fruits and seeds that are made possible through their labors? This opens up a great field for thought and research.

Now, then, let us look at bee-keeping from another viewpoint. Can bee-keeping and fruit growing be combined and pursued together so as not to conflict, one with the other, and can bee-keeping carried on in this way be made directly profitable through the honey and beeswax produced, without lessening the profits from fruit grow-

ing? My answer to both questions is that it certainly can, if you are really a fruit-grower and a bee-keeper. Mark well my words. Remember that there is a great difference between a bee-keeper and a keeper of bees. A bee-keeper is on to his job. He is alert, progressive, and energetic; knows how to handle his bees, and does the right thing at the right time, which enables him to harvest pretty good crops as a rule. A keeper of bees is like the man who plants an apple orchard with the expectation that the trees will take care of themselves until bearing time, so that he will have nothing to do but gather the crop which never materializes, and he wonders why. Unfortunately, we have too many keepers of bees, just as we have too many slipshod fruit growers, to the great detriment of the progressive, up-to-date grower, who produces a really fine article, grades it right, puts it on the market in a clean, attractive shape, with the expectation of realizing a fair recompense for his labor and knowledge.

Now, then, how can I become an up-to-date bee-keeper so as to profitably combine this vocation with fruit-growing? That depends very much on the person, and several things must be taken into consideration in connection therewith. If you are of a decidedly nervous temperament, afraid of the bees, tremble every time a bee buzzes near you, my advice would be, don't try to become a bee-keeper, for such persons will rarely succeed. To make a first-class bee-keeper, it takes a person of steady nerves and fearless disposition, and yet gentle and careful in all his actions. But, if your nerves are fairly steady, and you have made a success of fruit-growing, I see no reason why you should not succeed at bee-keeping if you will give it the same thought and attention you gave to fruit-growing. You did not become a successful fruit-grower in a day. You undoubtedly made some mistakes. Things did not turn out just as you expected. You did this or that too early or too late, and failure resulted. Just so with bee-keeping. You need not expect that you can become a successful bee-keeper in a day, or in a year. Like all other callings, it takes time, considerable study, some hard work and some practice, to elucidate the lessons you have studied.

First, procure "Langstroth on the Honey Bee, Revised," or some other classic on bee culture. Study it thoroughly and carefully, especially in its relation to the production of extracted honey, for the fruit grower has no business to try to produce comb honey if he expects to make a success of both fruit growing and bee-keeping, unless he is so located that he can secure expert help, quickly, whenever the occasion demands it. Begin with a few colonies—preferably pure Italians, in the Quinby improved hive, such as is used by the Dadants, of Hamilton, Ill. I know of no hive as good as this one, for the production of extracted honey, and I have tried about everything that has appeared upon the market, for the past forty years. Put in practice the lessons you have learned in your book, attend bee-keepers' meetings, and especially field meets, where practical demonstrations are made, ask all the questions you wish about problems that puzzle you, and they will be answered by experts who will be glad to assist you, and you will find these answers to be of much help. Subscribe for some good bee periodical, so as to keep abreast of the times; and, lastly, join the State Bee-Keepers' Association of the state in which you reside, and help boost it along, and thereby boost yourself as well.

Now, then, in conclusion, what can one reasonably expect as to the direct profits from bee-keeping? That, again, like in everything else, greatly depends upon the person. But in a general way I am almost afraid to tell you what can be made, and has been made, out of bee-keeping rightly conducted, for fear you might believe I was telling you a fairy tale. What one person has done, anybody else of like ability and energy, under similar conditions, can duplicate. I know of no other vocation that requires so little capital with which to start, and in which one can build up so rapidly, at little extra expense, as in bee-keeping, if you know your business. On the other hand, I know of no calling in which you can lose all you have invested in it, so quickly, as in bee-keeping, if you are not onto your job. I honestly believe that I am not putting it any too strong when I say that I know of no other vocation, generally speaking, in which the profits are so great for the capital and labor

invested, as in bee-keeping rightly conducted, not even banking excepted (and I speak advisedly), and it is a great surprise to me, as well as a disappointment, that bee-keeping is not made one of the leading studies in the Agricultural Department of our state university, instead of not being taught at all in a systematical, practical way. Quite a number of the other state universities have established a course in bee-keeping, and are teaching it in a systematical, practical way, and the great State of Illinois ought to be a leader instead of a follower in things which are for the progress and upbuilding of the commonwealth.

And now, my friends, I must close, and I thank you for your considerate attention. If you have any questions that you would like to ask me about bees or bee-keeping or the possible profits to be made therefrom, I will answer to the best of my ability.

Mr. Sanders—Will bees work close to their hives in preference to going a distance for their food? I considered that question before I put bees in my orchard. I used to notice that when the apricot trees bloomed, or the early cherry trees were blooming, before there was much bloom elsewhere, the trees would be literally full of bees, but when it came to the blooming of the pear trees and the apple trees, which were to be found blooming in every door-yard, there was scarcely a bee to be found in the orchard. This made me conclude that they were finding all the blossoms they wanted close at home, and, that being true, I would get little benefit from the work of the bees in my orchard, unless I got some bees of my own.

Mr. Baxter—Remember that the Italian bee will travel as much as five miles, if necessary, to procure nectar, but it is not profitable for them to travel more than a couple of miles; and, if the bees are so scarce in my locality that they do not cover everything in a mile and a half, there are not bees enough to cover the territory, but in some portions of Illinois, take it in Hancock County, in my home city, there are too many bees; they cannot find nectar enough to make a crop, except in extraordinary seasons like the past year. This spring I had one of the best pear crops in the city; the trees were breaking down with Keiffer pears, while those three-quarters of a mile away had practically nothing. In one of my apple orchards, about half a mile east of where I reside, or where my apiary is, all the north side of the apple trees were just loaded with fruit, while there was hardly anything on the south side, simply because the bees struck that part of the tree first and visited those flowers, or else they did not get on the other side, the rain drove them back again. That has been noticed time and again. Take it with the plum; I have wild goose plums every year. One of my neighbors that lives in the fore part of town hardly ever has any, although they have their varieties planted near by where the bees could visit from one tree to another and carry the pollen from one tree to the other, but without those precautions you cannot raise Keiffer pears and you cannot raise wild goose plums and many others. We have a great many different kinds of fruit; we do not know how many of them are self-sterile, and some more or less so. Among our apples we have a great many such, and it behooves us to find out these things and remedy them in one way or another.

Mr. Baxter then illustrated his method of extracting honey from the combs, and exhibited the combs used in his apiary and extracting frame.

Mr. McElvain—What is the difference in price of the extracted honey and comb honey?

Mr. Baxter—Extracted honey, wholesale, is usually from 7 to 9 cents a pound, where comb honey would be from 12 to 15. You can usually produce twice as much extracted honey as you can comb honey, if you know your business, work your bees right. We never destroy these combs; as soon as they are extracted put them back in the hive and fill them right up again. To make comb honey they have got to take the time to build the comb, and you have to use the material to make the wax, which is honey, and it takes from 12 to 20 pounds of honey digested, going through a certain process in their body, to make a pound of beeswax. You see the great cost in the amount of honey, to say nothing of the great cost of labor and time lost in producing comb honey.

Question—May I ask the process of extracting the honey?

Mr. Baxter—It is very simple. We have a large can with a reel, and this reel has a wire screen. We will suppose this is the comb honey there. It has a capping on. Take all the cappings off as thin as we can and put comb of honey in the reel. Our extractor holds eight of these frames. We try to see that the weight is balanced all around, then we swing the reel around, and by centrifugal force it forces all the honey out of the cells; it falls against the sides of the cans and goes down to the bottom of the can and comes out of the faucet at the bottom. We throw the honey out of one side, reverse the frame and throw the honey out of the other side, without injuring the comb.

Mr. McElvain—Do you have to warm it?

Mr. Baxter—No, we do not have to warm it, as a rule; we extract in weather that is warm enough. Of course, at this time of the year the honey would have to be warmed, so as to cause it to flow, but we aim to do our extracting not later than the first of October. The fall crop is finished in our latitude, when the frost has destroyed all the flowers, unless it be the asters, so there is no more honey to extract, and as soon as that occurs we extract right away, so as to be sure to get it off before it gets too old. You will find there is a vast difference between extracted honey and strained honey. Some people talk about strained honey. I have people every once in a while ask me if we have any strained honey to sell. I tell them no, I do not strain honey. Strained honey was produced before the extractor was known. They would go to a comb, kill the bees, take all that was in there, larvae brood, dead bees and everything, mash it all up, warm it, probably heat it on a stove, and then pass it through a cloth, and what ran out of that cloth was strained honey, of course, but look at the difference. In extracted honey you do not find any larvae, no dead bees, and it is as clear as the finest comb honey that you can find anywhere, and that is why I always want to make a distinction between extracted honey and strained honey, because they are no more alike than an apple is like a peach.

A Member—I imagine it would have a different flavor.

Mr. Baxter—Very much so.. In this extracted honey there is no foreign smell nor taste, nor any dirt, while in the strained honey you always get the flavor of the crushed brood, dead bees, etc. It destroys the flavor.

Mr. McElvain—How do you keep it from getting into a candied condition?

Mr. Baxter—Honey that candies or sugars is a pure honey; impure honey will not candy. You can mix glucose with honey and you can tell just how much honey is in there and how much glucose. The honey will settle and become candied and the glucose will be on top, liquid, but if it is candied thoroughly, it is pure. Alfalfa honey is the first to candy; sweet clover candies readily, and white clover not quite so fast, and Spanish needle still more slowly.

Mr. McElvain—Do you keep your extracted honey in a warm place?

Mr. Baxter—Always in a dry place.

Mr. Richardson—What do you consider the two or three best honies?

Mr. Baxter—Well, that depends how you want that question answered. If you mean honey produced in a small way, that you seldom find on the market, I would say that probably orange, apple and Ti-Ti.

Mr. Richardson—Two of those three that you mentioned are not produced here.

Mr. Baxter—No, three of them are not really produced here, because you cannot find apple honey on the market. The best that we have here, white clover honey, brings the highest price on the market; it even sells for more than orange honey does. It is a standard all over the United States.

Mr. Richardson—Are there enough basswood trees in this country to produce honey?

Mr Baxter—Yes, we have basswood honey. It is not as good as the clover honey; it is not as white. It has a strong odor. Basswood gives honey a kind of medicinal flavor that some people do not like.

Mr. Sanders—Is the sweet clover of Illinois almost as good as the white?

Mr. Baxter—It does not make as fine a honey. Some people like it—I like it—it has the odor more or less of the sweet clover itself, but I remember in 1903 I had a pretty good crop and one customer up in Birmingham, Michigan, wanted some samples of white clover honey. I sent samples of white

clover and sweet clover and he wrote back and ordered five barrels of white clover honey. I was not well at the time and I told my man who got the honey ready to mark the barrel and be sure and get nothing but white clover honey. He got it ready and shipped it and when I got up and went out to see what he had done I found one of my sweet clover barrels missing and I expected to get a pretty heavy rake-up from this man, but within two or three weeks I heard from him, saying there was one barrel of sweet clover honey in that shipment, and he said: "If you have any more, send me five barrels more, even if it does take dynamite to blow it out of the barrels."

Mr. McElvain—Do you recommend sowing buckwheat in this latitude?

Mr. Baxter—I cannot recommend it in this latitude at all. I have been giving buckwheat seed to my neighbors ever since I began bee-keeping forty years ago until recently, with the expectation of getting returns from it in honey, but buckwheat does not produce honey in this latitude. In Wisconsin, Michigan and York State it is the best honey producer. It is the same as alfalfa; alfalfa does not produce honey here.

Mr. McElvain—It does not produce any seed here.

Mr. Baxter—I do not know, I have not investigated, I have never seen any bees on it; in the west it is their main crop. Take golden-rod—golden-rod produces a great deal of honey in the New England states, but it does not produce anything here as a rule. This year it gave a pretty fair crop.

The President—What is the quality of the golden-rod honey?

Mr. Baxter—Very much like the Spanish needle, only it does not have quite as strong a flavor; it is pretty good.

Mr. Richardson—That is the chief objection we have to the buckwheat honey. We can get a considerable amount of it, but it is so dark in color and it is so strong and coarse in quality that it sells very low; there is not much call for it.

Mr. Baxter—That is true to a certain extent, but it all depends upon circumstances. You go back in York State, where they are used to buckwheat honey, and sections of Michigan, where they grow a great deal, they will ask for buckwheat; they are used to it, and they want it. I have some customers in Kansas send to me for clover honey every year. They say, "We cannot eat alfalfa honey; we do not like it." It all depends on what people are used to. Buckwheat honey is a dark reddish honey, and I do not like it at all, but it is used extensively in York State as a table honey, and it is used extensively by bakers. Remember there is a big demand from bakers, they make honey cookies. I have a customer in Iowa to whom I sell twenty-five barrels, who has been taking honey from me for thirty years. It has been used also, the cheaper grades, in curing hams and sides, and it makes delicious meat, and there are many uses for honey. On account of the high cost of sugar this year, honey has been in big demand; there has been a big crop all over the country east of the Roocky Mountains, and the expectation was the prices would go to pieces. Instead of that, it has been rising. I made a mistake by selling my honey too early, but that shows the uncertainty of things. I remember in early days we used to use honey for making preserves, for canning fruit and numerous other things, and I assure you you cannot find any sweet that will make as fine preserves or give the same flavor, provided you use the right honey, white clover. You do not want to use the strong kinds.

The President—Do you know anything about its medicinal qualities?

Mr. Baxter—Yes, the medical qualities of honey are greater than those of any other sweet, I don't care what it is. A man who is suffering with Bright's disease or with diabetes can take honey and it will not hurt him. He cannot use sugar at all. It is good for infants. It is good in cases of constipation; there is nothing better, and as a nourishment honey is nearer a balanced ration than anything else I can think of. A man will live longer on honey and bread alone than he would live on bread and butter alone, and he would have more energy and be better fitted for his everyday occupations than he would on any other foods. It is a predigested food; it is an inverted sugar, and it is readily taken into the system, builds it up fast, and there is more nourishment in a pound of honey, that you can buy at

ten or twelve cents retail, than there is in a pound of meat that costs you fifteen to twenty-five cents, or a pound of butter that costs you from twenty-five to forty cents. That has been fully demonstrated.

The President—I should like to confirm Mr. Baxter in that respect in one way. I am a reformed druggist, for thirty-five years I have had a drug store and during a large part of that time I had a great deal of stomach trouble, indigestion a great deal, and frequently honey was about the only thing I could eat, bread and honey I could eat quite readily, while other foods did not agree with me.

Mr. Sanders—But one has to be careful not to overdo it.

The President—That is true, yet I could eat honey in quantities that people would say would surely hurt me. Some six or eight years ago I sold out my drug store and since then I have been out of doors most of the time and have had no trouble of this kind, but I surely think honey is of great value in such cases as mine.

A Member—Does it not act as a poison to some systems?

Mr. Baxter—Some people cannot touch it.

The President—There are some people cannot eat very much of it, it makes them sick, but that is true of almost everything else. Some people cannot eat strawberries, some cannot eat apples, but it is not true in the majority of cases.

Mr. McElvain—Would honey made from poisonous plants be poisonous?

Mr. Baxter—That has not been determined. Some claim it will and some claim it will not, but in the general run of honey that you get out of the hives it would be impossible from any poisonous plant to get enough to hurt a person; the only thing injured would be the bee itself gathering it from the poisonous plant.

Mr. Richardson—How much truth is there in the belief that seems quite generally prevalent that the bee will avoid these poisonous plants?

Mr. Baxter—I am not posted enough to say as to that. I have seen them working on some of the poisonous plants, but to what extent they work there and how much honey they gather from there, I could not say.

Mr. Richardson—I have heard the statement made that bees as a rule would avoid poisonous plants.

Mr. Baxter—Yes.

Mr. Baxter then showed pictures of his apiary, house, etc., and said:

As to the profits of bee-keeping, I told you there was no business as profitable, and if you knew just what a person could make out of bee-keeping you would agree with me. Bees are not costly. You can go into the country and buy bees at two or three or four dollars a colony. Truly, they are not in hives, but you can get the kind of hives that are the best to transfer them, so that the original cost would not be very much. In 1882 I bought 90 colonies of bees, Italians, with one extracting super on top of them in the spring of the year for $10 a hive; that is pretty high. That year those bees made me something over $1,500. That one year I paid for all those bees and paid for my time and all expenses and had some profit left. That is not done every year, remember, but a man that is on to his job, in a reasonably good location, wherever there is white clover and plenty of smartweed and Spanish needle, can make a reasonably good thing out of keeping bees. In forty years that I have been in the bee business I have only had two total failures, when I had to feed my bees, that was in 1906 and 1914. In 1914 I had to buy 9,000 pounds of sugar to tide my bees over and keep them from starving, and I did pretty nearly the same thing in 1906. In 1883 I took a number of bees out into the country, forty-one hives, and those bees produced something like seventy, mostly by swarming, because I did not know then just how to control swarming; I was rather new to the work. Those bees produced during the year 23½ barrels of honey, which averaged about 550 pounds per barrel, making a total of 12,925 pounds of honey, which sold that year at 9 cents a pound wholesale by the barrel, producing $1,163.25, or an average of $28.37 per colony of bees that cost $10. That is pretty nearly 300 per cent on the cost price. In what can you invest your money to make such profits as that? That was the best crop I had in forty years, but the average is very good. In 1889 I got 65 barrels of honey from about 180 colonies, and I have had a good many good years like that;

DR. A. C. BAXTER, 1st V.-P. Ill. S. B.-K. Assn.

HONEY AND ITS COMPARISONS WITH OTHER SWEETS.

It is the fault of man to praise highly any thing in which he is interested, the bee-keeper being no exception to the rule. He is fond of praising his honey as a food and a "cureall" for the diseases to which the human body is heir. He does not praise honey with the idea to mislead or deceive, but from lack of knowledge of what honey really is. When he tells of the medical value of honey he bases his opinion on what he really thinks has taken place as he has used it in various ailments and, being still able to tell the

tale, he believes honey the agent that restored his health. When the facts of the matter are carefully looked into, it is discovered that he would have been well in a few days without any treatment.

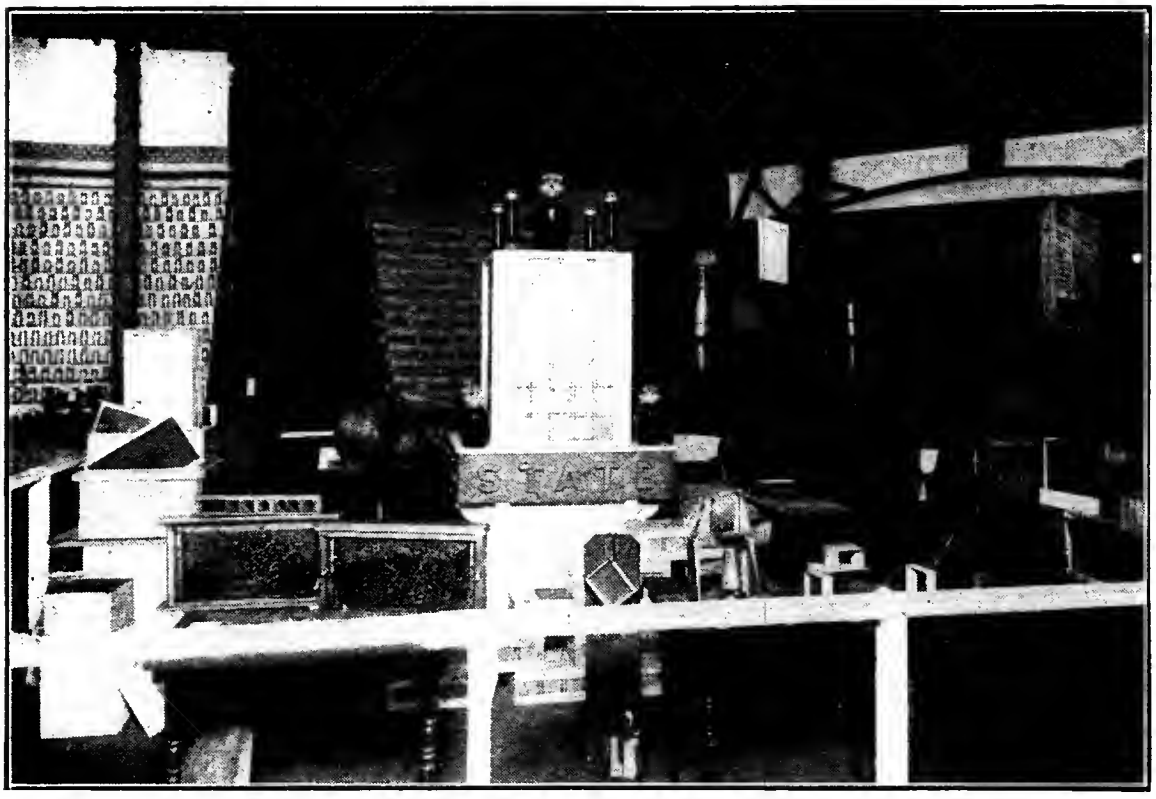
Another common fault is to explain to the housewife the food value of honey and compare its value with some common article of diet. For example, that seven ounces of honey is equal to a quart of milk. True it is; but the good housewife don't believe it, and, at any rate, you couldn't expect her to replace milk with honey. On the other hand, if she learns that strawberries or peaches have a better flavor when sugar is replaced with honey, or that bread and cakes made with honey keep better, not drying out as when made with sugar, she is at once interested and will get some honey to see if the story is true.

It is as an article of diet that honey must be known, if it is ever expected to become more than a luxury or a sweet to please the children, an article that surpasses all other sugars in the diet of mankind. To understand this it might be well to explain what honey is and the digestion of the various sugars. The chemist tells us that honey contains forty per cent levulose, thirty-three per cent dextrose, and one and a half per cent sacchrose, the rest being moisture, coloring matter and dextrine (vegetable gum). This percentage of sugars varies, due to the nature of the nectar and age of the honey. In old and well ripened honey sacchrose (cane sugar) is converted, by a ferment present in all honeys, into levulose and dextrose.

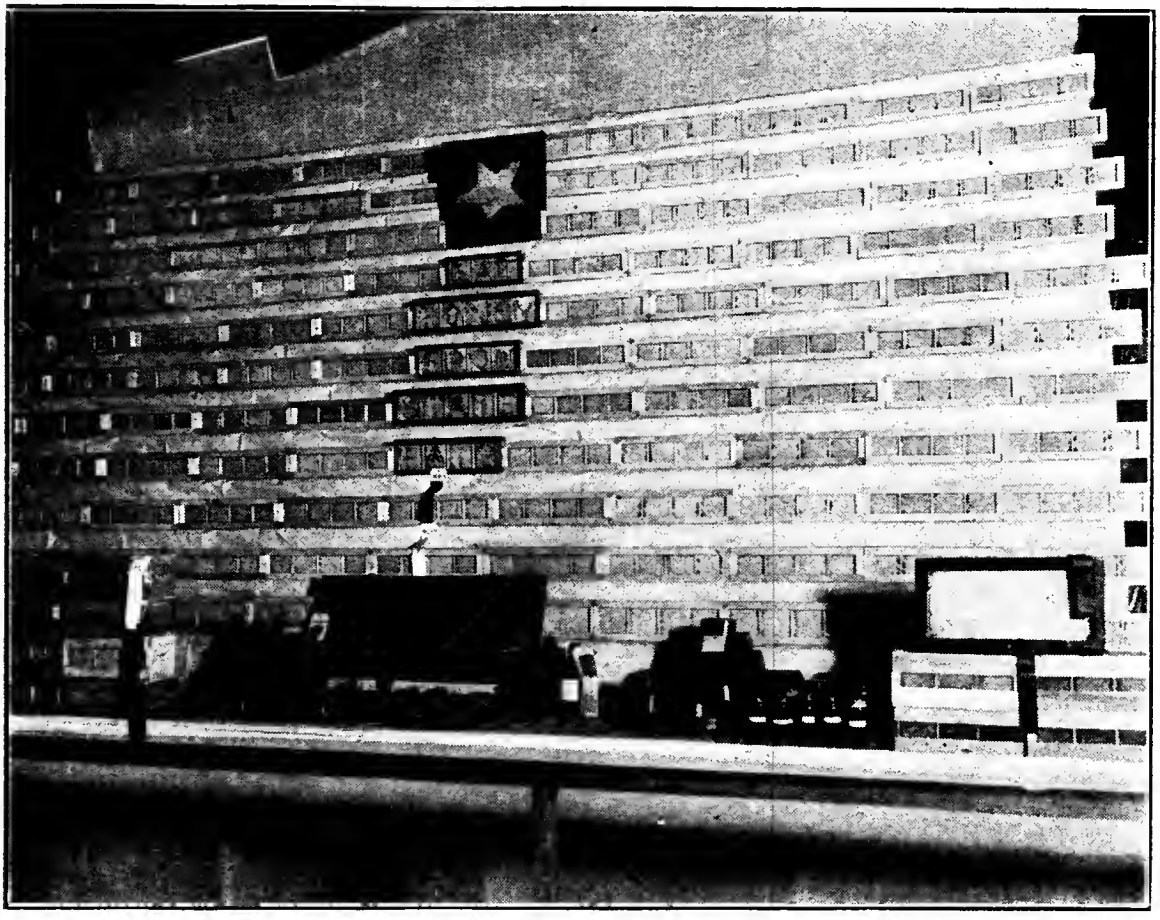
Honey, therefore, consists of two principal sugars, levulose (fructose) and dextrose (grape sugar). These sugars derive their names from their action on a ray of polarized light, their chemical formula being the same. Levulose in solution turns the ray of light to the left, it being leavorotatory, and, as its name indicates, is a "left-handed" sugar. Dextrose, on the other hand, turns the ray of light to the right, being destrorotatory, and is therefore a "right-handed" sugar. The predominating sugar in honey is levulose, it being the sugar that gives honey its high food value. All sugars are digested and assimilated in the small intestine. Sacchrose (cane sugar) is split, by an intestinal ferment, into parts of levulose and dextrose, and is then absorbed, while honey already containing these sugars does not have to be acted upon by a ferment and can be assimilated by any one, even if the ferments are absent. Levulose is very readily absorbed in the intestinal tract, while dextrose, without the presence of levulose, is very slowly absorbed. In some manner the "left-handed" sugar in its passage through the intestinal walls pulls along the "right-handed" sugar.

The glucose of commerce, known in America as corn syrup, must be regarded as mixture of dextrose, maltose and dextrine, and is prepared by hydrolysing starch by boiling with a dilute mineral acid. After the acid is removed and the solution clarified, the liquid is concentrated in vacuum pans to the density of syrup. A small quantity of solution of sodium bisulphate is added to bleach it, to prevent fermentation and to inhibit browning. The maltose of this mixture must be acted upon by a ferment before it can be used by the body, and then it forms more dextrose. So it is easy to see that an individual who uses this syrup is receiving very little food value for his money. The only thing accomplished is the softening of a little dry bread So, with all of man's methods, nature's sugar—honey—still continues to be the best sweet for man.

1903, 1904, 1905, 1907 and 1908 were all pretty nearly as good years. This year I began the season with 130 colonies, but they were reduced down to below 72 colonies, which produced 28 barrels of honey, 565 pounds per barrel, which would be 15,820 pounds of honey. There was some increase, I do not know exactly the number, but the increase was mainly by divisions, what we call artificial swarms, because I make artificial swarms out of the weaker colonies, those that are not able, or strong enough to make a good crop of honey, but the strong swarms I never touch, because I want the honey first of all. That honey at 8 cents a pound is equal to $1,265.60. That is what it is selling for now, 8 cents a pound. I am getting 9 cents, or an average of $17.60 per colony.



STATE ASSOCIATION EXHIBIT.



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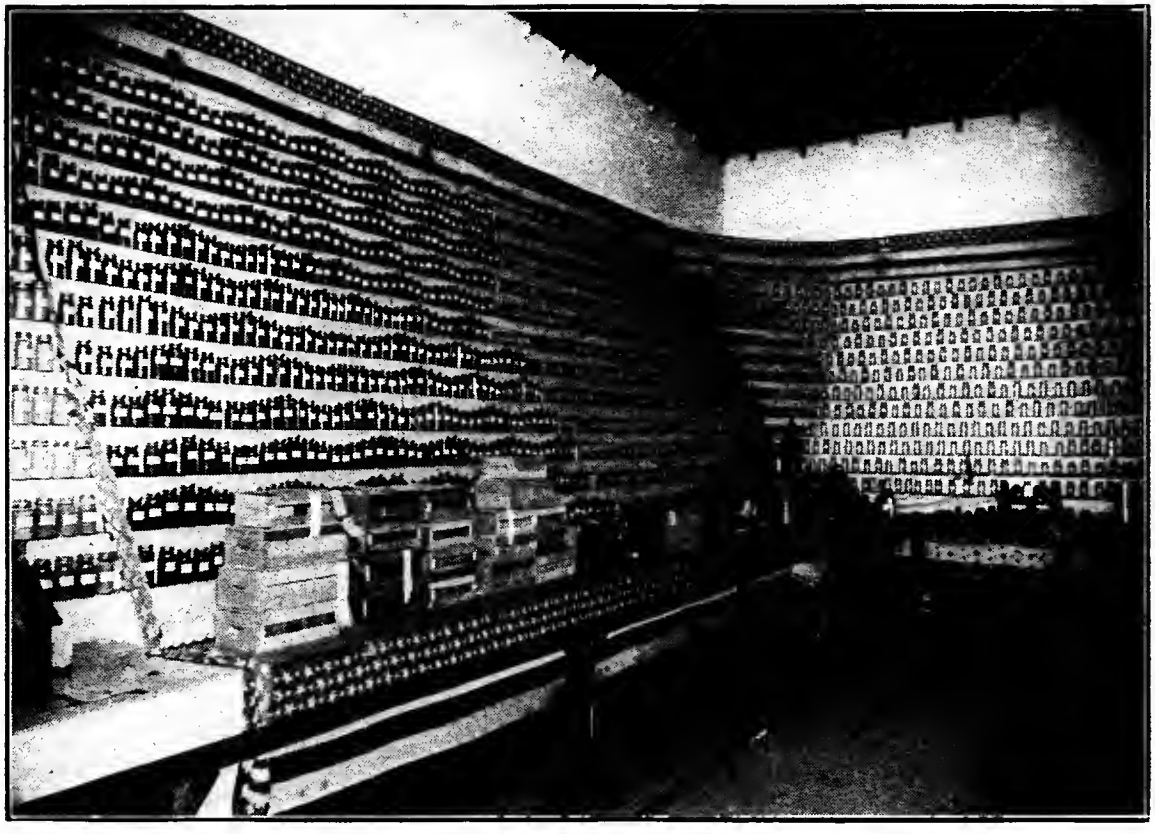

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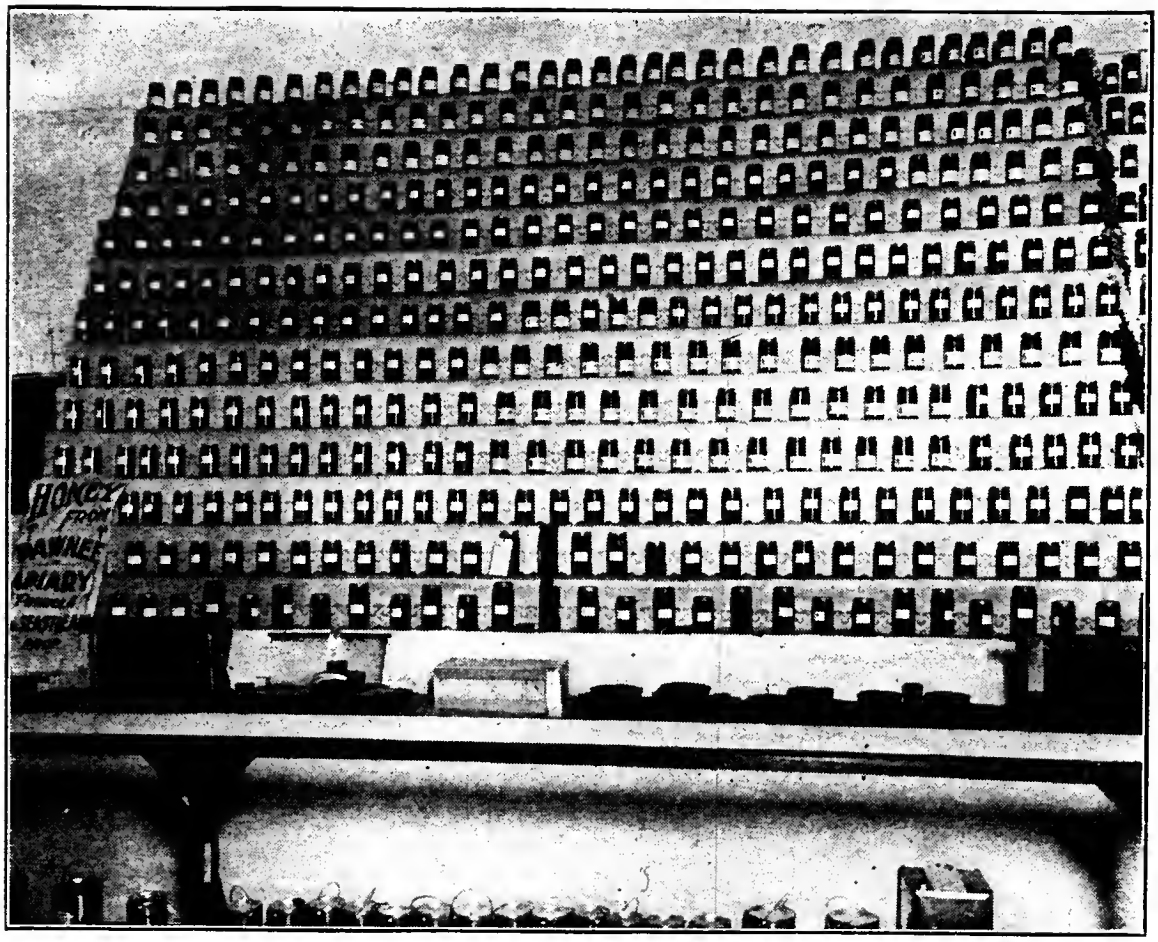

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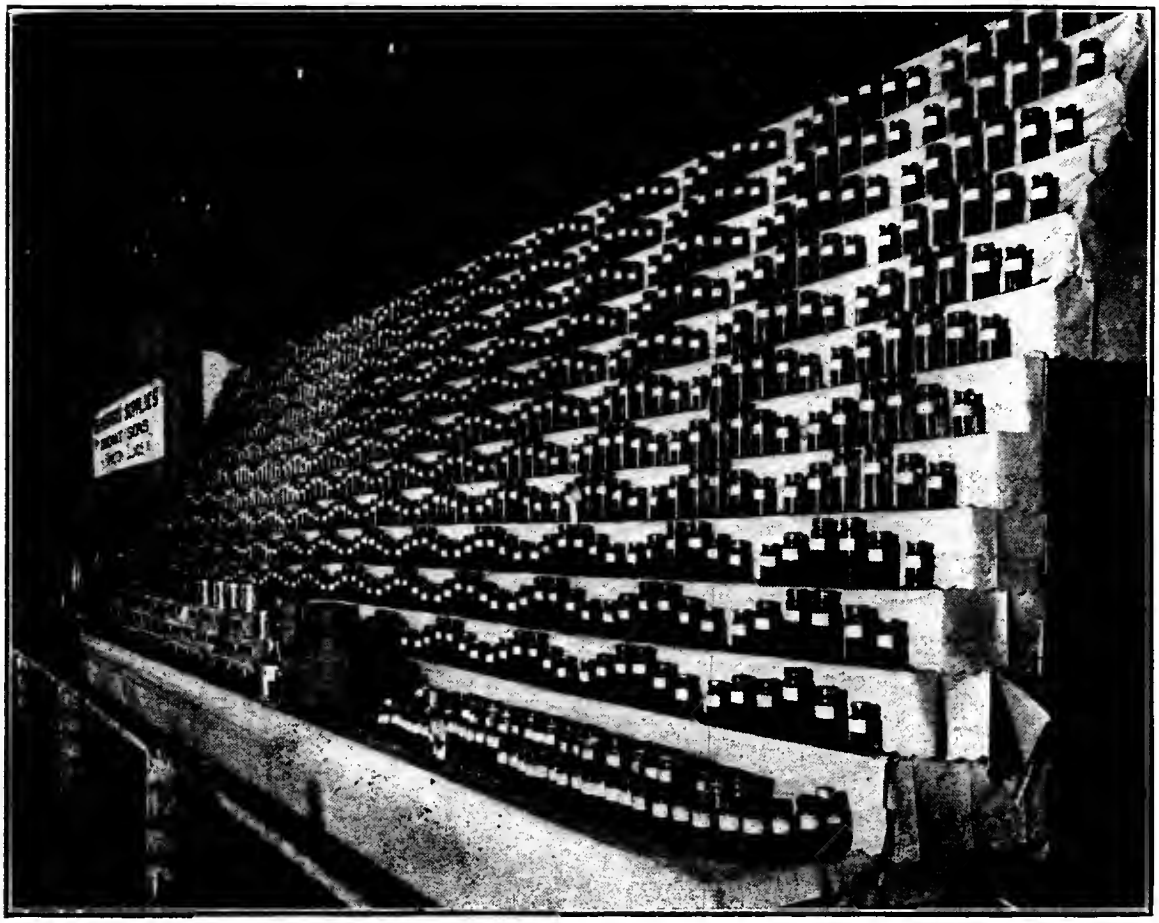
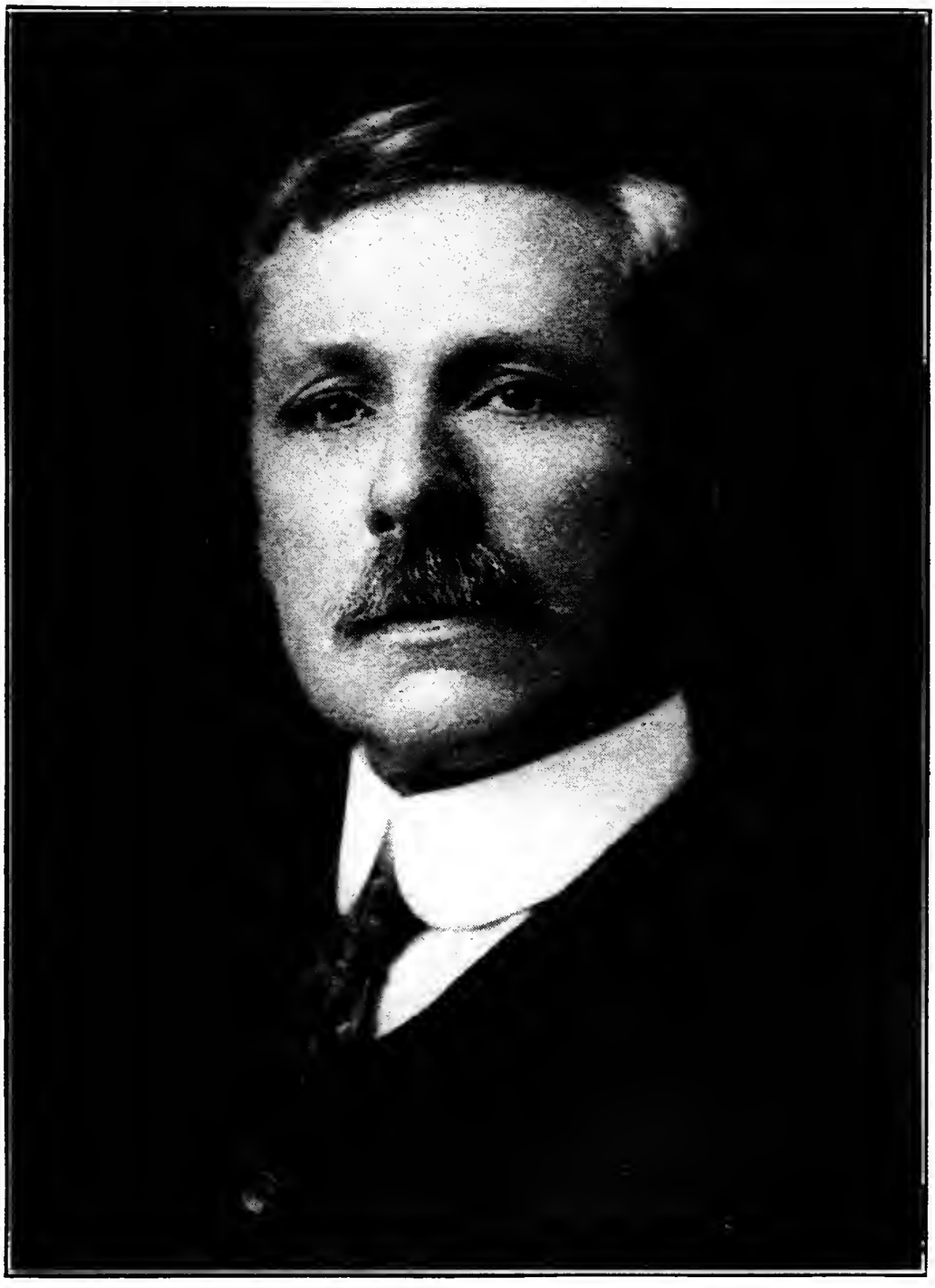


J. A. STONE & SON'S EXHIBIT.

C. P. DADANT.



PRESIDENT E. S. MILLER,
of the Chicago-Northwestern.

THE 19TH ANNUAL CONVENTION

OF THE

Chicago-Northwestern Bee-Keepers' Association,

HELD AT THE

GREAT NORTHERN HOTEL, CHICAGO,

DECEMBER 5 and 6, 1916,

was called to order at 10 a. m., December 5th, by the Vice-President, Mr. E. S. Miller.

President Miller—The first thing on the program will be the reading of the Minutes of the last meeting.

Mr. Bull, Secretary:

JOHN C. BULL.

Secretary-Treasurer for 1917,
Also Secretary-Treasurer of the National.

Record of the 18th Annual Meeting of the Chicago-Northwestern Bee-Keepers' Association, held at the Great Northern Hotel, December 17th and 18th, 1915.

President N. E. France addressed the meeting at 10.50 a. m., December 17th, 1915, and appointed as Committee on Resolutions Messrs. Bull, Roehrs, and Hassinger.

Committee to audit officers' records: Messrs. Kannenberg, Coppin, and Wheeler.

Committee to take charge of the Question Box: Mr. J. C. Bull.

Mr. France emphasized the value of your queens and led in a discussion in which Pref. Jager, of Minnesota, also took part.

At noon the meeting adjourned and reconvened at 2 p. m., when Dr. Phillips, of Washington, D. C., delivered an address on "Outdoor Wintering," which had close attention.

In his usual happy manner, Mr. R. A. Burnett discussed the reason for the low price of honey.

At the afternoon session Prof. Jaeger, of Minneapolis, talked on the care of bees and the marketing of honey, and papers from Mr. Kneser and Mr. C. P. Dadant were read.

Mr. George W. Williams, of Indiana, brought up the subject of increasing the consumption of honey through interesting teachers of Domestic Economy in the public schools of the country.

At the evening session papers were read by Mr. Edward Hassinger, of Wisconsin, and Mr. E. S. Miller, of Indiana, and a paper was read, written by Mr. Swalm, of Wisconsin; also Mr. A. L. Kildow, State Foul Brood Inspector, discussed the foul brood situation and the desirability of Field Meetings, and suggested that the Chicago-Northwestern Bee-Keepers' Association arrange for a meeting in connection with other meetings to be held in northern Illinois.

The President appointed as a committee to arrange for such Field Meetings: A. L. Kildow, J. C. Wheeler, E. H. Bruner, J. C. Bull, C. O. Smith.

The discussion regarding "Value of Honey as a Food" was participated in by Mr. N. E. France, George W. Williams, B. F. Kindig, and the work planned by the United Honey Producers of America was explained on December 18th, 1915.

The report of the Secretary and Treasurer was submitted.

The question of education was again brought up. The Chair appointed a committee to attend to that work, consisting of: J. C. Bull, E. S. Miller, C. O. Smith, A. Coppin, and E. H. Bruner, with instructions to co-operate with the committee appointed for similar work by the State Association.

In a general discussion regarding the means of promoting the welfare of the Association it was emphasized that medals as premiums for best exhibits of honey were desirable, and President N. E. France was appointed a committee of one to investigate.

Report of delegate J. C. Bull to last National Convention was interesting but the convention voted not to join the National Bee-Keepers' Association in a body for 1916, and voted unanimously in favor of joining the Illinois State Bee-Keepers' Association for 1916. Officers elected:

President—N. E. France.

Vice-President—E. S. Miller.

Secretary and Treasurer—J. C. Bull.

Mr. John C. Bull was elected delegate to the Illinois State Bee-Keepers' Association.

At the convention, Afternoon Session, Saturday, the 18th, Foul Brood was discussed at some length.

Questions were asked and answered, and report of Committee on Resolutions was read and adopted.

Convention adjourned at 3:30 p. m.

The financial condition at the present time, before the opening of this meeting.

Received from former Secretary Bruner		$59.09
Dues, before this meeting.....		22.50
Total		$81.59

Expenses.

J. A. Stone, dues, Illinois State	$ 7.50	
Postage, printing	40.02	
	$47.52	$47.52
Balance in Treasury.....		$34.37

The bill for the printing of these programs has not been presented, and I do not know how much it is, so I cannot report that.

President Miller—Gentlemen, you have heard the reading of the Minutes. what is your pleasure?

Mr. Kannenberg—I move they be accepted and placed on file.

Motion seconded and carried.

President Miller—Gentlemen, it is with a great deal of regret that I have to announce that our President, Mr. N. E. France, will not be with us. I was hoping he would be here and take charge of this meeting. Since he is not here we will have to get along the best we can without him.

The first on the program is the Foul Brood situation and its modern treatment by Mr. Kildow. Is Mr. Kildow here?

We will have to re-arrange our program somewhat, owing to the fact that some of the speakers who are here will have to leave this evening; others who are on the program are not here.

President Williams—We have a paper by Mr. Hassinger.

Mr. Hassinger—The subject for this meeting assigned to me was: "Heating and Clarifying Honey." I have not much to give on that, but what I have I will give you:

Marketing Honey.

(By Edward Hassinger, Jr.)

This subject—"Marketing Honey"—may be compared to a tree. We have the soil to consider for the tree to grow in, and the tree consists of the roots, the trunk, branches and the leaves.

It would take a book to tell in detail all there could be said about markeing honey. In attempting to say a little that may come under some of these heads, same is based upon personal experience. Your experience may be different, therefore we will agree to disagree.

It is conceded that when men smile and agree progress ceases or a fact is established.

As our home market should be considered the best and most reliable, we must consider it first. When our home trade is fully taken care of twelve months in the year, then we may look for outside markets.

When we build or make plans we must have a foundation or basis to

work on. The basis for marketing honey would rest first upon the amount of the crop in your own community, or, for convenience, will say your county. To know the yield per colony is not enough. We must go further. We must know the yield per colony and we must know the number of bee-keepers in our county. We must know the number of colonies each owns. We must know the approximate number of colonies run for comb and extracted honey. We must know how many of these bee-keepers are specialists, and how many colonies do they represent. By specialists is meant such bee-keepers who depend upon the bees as the main source of income. How many are not specialists but are up to date in their methods, and how many colonies they represent. How many are just bee owners, and how many colonies do they represent.

We must know how all of these dispose of their crops, the prices asked, and the kind of packages used, et cetera.

We must also know the poulation of our county, the number and size of villages and cities, the amount of honey shipped in or otherwise brought into the county and how put up.

As an illustration and for convenience, the figures and results of "Outagamie County, Wisconsin," may be interesting to you.

Outagamie County, Wisconsin.
Area—634 square miles.
Population—50,000.

Five cities. Population of each: One, 17,000; one, 5,000; one, 1,500; one, 1,000; one, 500. Total 25,000. This equals one-half of the population in the county.

There are five bee-keepers in the county who might be called specialists; that is, bees are the main source of income. They represent about 800 colonies. One sells most of his honey wholesale, and lives seven miles from our place. One sells all of his honey by canvassing the country and does not go more than eight miles from his home; this does not include any city; his honey is put up in earthenware jars; empties exchanged at ten cents net; he lives twenty miles from our place. One lives fifteen miles away and retails most of his in another direction; he also sells his honey in tin pails, et cetera.

All of these produce mostly extracted honey.

There are about twenty in the county that own from 20 to 60 colonies and represent about 1,000 colonies; several of these produce mostly comb honey and most of it is shipped out of the county. The balance sell their honey in every way, shape and manner. Several of them sell extracted honey at eight cents per pound and comb honey at twelve cents per pound. About sixty bee-keepers have only a few colonies each and represent about 500 colonies. This would be a total of eighty-five bee-keepers in this county; they represent about 2,300 colonies.

Under these conditions, two different seasons we asked 12 cents per pound for extracted honey in tin pails by advertising, et cetera. We failed to get or hold much trade but this was early in the season when all other bee-keepers had honey to sell at the prices already mentioned. In further analyzing our failure to get a higher price for our honey even supposing the quality was better than the average.

It seems there were not enough people who could or would pay more for honey, especially as long as they could get it elsewhere for less money. As the smaller cities consist mostly of retired farmers, and, broadly speaking, most of them have friends and relatives in the country who have bees and supply them with honey annually. The per cent of people that may be classed as rich, wealthy or well to do is so small that to work up a trade for high priced honey would require more time, energy and money than would be worth while; that is, the first cost would be too great for any individual bee-keeper to attempt it any place outside of large cities.

As there are approximately 2,300 colonies of bees in the county and we will assume that the average crop was fifty pounds per colony and is about the average yield one year with another.

This would be 115,000 pounds of honey or 2.3 pounds of honey for each of the 50,000 population in the county; same to be consumed in 365 days or one year; if no honey was shipped into or out of the county; as near as can be estimated as much honey is shipped into the county as out.

Practically all the honey put up in

small tumblers and sold in the stores comes from outside of the county. The price that the tumblers of honey are sold at to the grocers is so low that any of our local bee-keepers would rather sell wholesale than to try to put up honey in glass tumblers and compete with those that are now supplying the trade in this size package.

At this date (Nov. 25th) there are only three or four bee-keepers in Outagamie county who are not sold out of honey; and no doubt most of the people are supplied with honey for a month or two.

Of course you all know that a great many people are supplied with honey for a year when they have a few pounds in the house.

People in the city will very seldom buy more than one or two gallons at one time; while in the country five to twenty gallons are not exceptional cases.

It is to be expected that during the holiday season honey may not sell very readily; but we can see no good reason why honey should not sell as readily during February, March and April, as during September, October and November.

After knowing the conditions in Outagamie County, as outlined above, we have no fear of not being able to dispose of our honey by holding it for the winter and spring trade; at this time we expect it will be easier to raise the price at least a little, and get greater results by advertising.

For the past five months our trade has taken an average of 1,000 pounds per month; we still have nearly 4,000 pounds and can sell it at an advanced wholesale price; get our check; spend our money and forget about it until another year when the crop is large; the wholesale price very low and the local or house trade not developed as it would be by keeping all our honey and spending some time and effort in developing our home trade, because we can depend upon our home trade another year but we could not depend upon the wholesale markets for a fair price year after year; there are exceptions to this in a few cases with large and expert bee-keepers whose crop always commands a good price regardless of other conditions.

This is especially true with some fancy comb honey producers.

It seems that eventually we must get together and organize, nationally and locally. This does not mean that we will or must form a trust and dictate the price of our honey without considering the supply and demand.

It does not mean that the minute we are organized we want or could get thirty or forty cents a pound for our honey.

It does not mean that those of us who can make a living income from bees with extracted honey at six or seven cents per pound should not be interested or perhaps entitled to more.

By organized effort such as advertising and teaching the food value of honey in our schools, crop reports and equal distribution of the crop; such may be classed as national problems and may be taken care of to advantage by a national organization.

The price of honey, the style and size of packages could be better taken care of by a branch of a national organization. The retail price for honey varies perhaps 100 per cent between the large cities and out in the country; it does not seem practical to dictate or ask the same price in the country as in the large cities where the cost of selling is so much greater.

By organizing, it seems that in a given locality, for instance the size of the average county, the bee-keepers could agree on a price to be asked for any particular season depending upon the crop, etc.

The point is not to ask a high price for honey so much as for all the bee-keepers to ask the same price; to get them all to ask the same price should not be difficult when they can be convinced that the production of honey in the United States is only a little more than one-half pound per person, annually; if this should be a low figure, two or three pounds certainly would be a high figure of the amount of honey actually produced and consumed.

After using the gallon and half gallon glass jars or bottles with wood and wire handles, and Mason jar finish; that is, wide mouth with metal screw cap; after using over one thousand of these bottles the past year for home trade, we are thoroughly convinced that the looks of the container alone will make a sale without a salesman; easier and quicker than a tin package with a salesman.

Sometimes they would actually buy

the honey to get the bottle and, finding the honey very good, would come back later to buy the bottle to get the honey.

It seems every one wants one or more of these bottles for other purposes. About 95 per cent of our honey will be sold in these two sizes and style of packages; the gallon size is in the lead two to one.

On one occasion we took forty of these bottles, half of each size, to a city of 3,000, just out of our county, found the leading grocer. He said he had no call for extracted honey and could not sell it no matter how it was put up. We spent an hour in his store before he would even consider or consent to have us leave the honey in his store; he consented to having us leave the honey in his store with the understanding that he would pay us after it was sold.

Before we had the honey unloaded, several bottles were sold at the price suggested by us that he should ask; 75 cents for the half gallon, six pounds net weight, and $1.35 for the gallon, twelve pounds net weight.

Now the grocer was becoming interested and wrote out a check in our favor for half of the money.

We suggested that he make a window display of the honey, which he did, and it did not take him long to realize that he must raise the price, it was going too fast. He raised the price five cents on each.

Seven days later we received a long distance call from him; he wanted another load of honey, the first was all sold.

It seems there was very little extracted honey produced in that locality, and explains why it was so easy to get a higher price for the honey. When asking the same price here, people would not buy unless they wanted the bottles very bad, and did not have any. Anyhow the bottles are a winner in either case.

One gentleman was offered five cents for the bottle after it was empty; he replied that he would not take thirty-five cents for it.

Most people naturally handle glass with care. We have had only four cases that came to our knowledge of bottles being broken while filled with honey, and these were broken either through carelessness or accidentally.

These bottles are very easily washed and of course do not rust, and as a return package are ideal. It seems much easier to make a sale by asking so much for the honey and so much for the bottle and buying the bottle back; but of course not until more honey is wanted and then the full one is simply exchanged for the empty one and so much credit allowed on same.

By the gross the gallon size cost 9¾ cents each with the freight from Chicago to Greenville, Wis.

The half gallon size with freight, also by the gross, cost 7½ cents each.

This year we asked ten cents for the bottles and allowed ten cents credit for same when the next order was delivered. Up to the present time only about three hundred of the bottles have been offered in exchange.

Until everybody has one or more of these bottles we cannot expect to get many in return. Of all our local customers who formerly bought honey of us in the five gallon tin cans, every one of them prefers to buy the same amount in five one gallon bottles at five cents extra for the bottles. It is so much easier to handle than in the 60 pound tins. Everyone is your agent without knowing it, and you are not obliged to pay him; it is so easy and no trouble whatever for them to let friends and relatives have a gallon or two; and, when the five gallons are gone, another five are ordered. We have had this experience again and again.

The Illinois Glass Company, with factory at Alton, Ill., make these bottles. They advise us that the price has advanced again, and to enter orders subject to a delay of several months. By the gross the bottles are packed in open slatted crates; two and three dozen in a crate with heavy sheets of paper between the bottles. This same paper is used again when packing the bottles of honey in the auto when delivering.

When people come for their honey, a sheet of this paper is wrapped around the bottle as tight as possible and fastened with a pin at the top. The bottle may be carried by the handle and the paper will not slip off, and is as safe as it would be in a corrugated paper carton.

Outagamie County has three agricultural fairs annually.

At two of these we had an exhibit of bees and honey. It was the first

exhibit of bees and honey that there ever was at these fairs and it was easy to see that it was a big attraction; this gave us an opportunity to learn some things.

By having the booth arranged so as to keep the crowd moving, the bees with queen were placed on one end; but without drones. First showing the bees and queen to a crowd, then, to break the crowd from looking at the bees and queen too long, and give others a chance and at the same time give us a chance to talk to as many people as possible, only a few seconds were allowed when there were many people in the building.

While telling about the queen the line of talk was suddenly switched to the drone, and pictures of the drone, queen, and worker, were alongside of the live bees.

Here the picture of the drone was shown in comparison with the queen and worker. It was remarkable to notice how the eyes of the crowd could be turned from the bees and queen to the picture of the drone, etc.

While telling a very little about the drone, the line of talk was switched to a question: "Do you know how extracted honey is produced?"

This question was asked of hundreds of people and we honestly believe not one in twenty knew how.

As we had no room for an extractor, only pictures showing the process of extracting were shown in connection with a full comb of sealed honey in a glass case and a few new empty combs after being extracted.

These combs were shown and the process explained with the help of the pictures.

The moment this was completed another question was asked:

"Did you ever try honey to sweeten fresh fruit, breakfast foods, pan cakes, ice cream, cold meat, cheese, candy, cold and hot drinks?"

Almost without exception, the answer was, "No, I never tried that."

We also had a large sign suggesting honey as a sweetener, with a list of these foods that it might be tried on.

Frequently the remark was heard: "Now, I will have a better appetite for extracted honey, knowing how it is produced."

This would suggest that it would pay us to teach the public the process of extracting honey by demonstration as the Minnesota State Fair has been doing.

At the same time it teaches the reason why extracted honey can and usually is sold for less money than comb honey.

It also helps to kill the suspicion that extracted honey might be adulterated.

The direct sales from these two fairs was nearly 1,000 pounds of honey.

When meeting any of these people later, we made it a point to ask them if they had tried honey as a sweetener for other things in place of sugar, etc. Yes, they had tried it and that it was delicious after using it in the right quantity, etc.

This would suggest that there is a great field to be worked in educating the people to use honey as a sweetener, etc. Especially now, with sugar at a high price.

We would suggest that the United Honey Producers, or any other individual company or society, print cards, stickers and perhaps on all stationery for bee-keepers, same to suggest honey as a sweetener, and give a list of the eatables it might be tried on.

The U. H. P. Trade Mark could be used on same.

We honestly believe this would be more effective to increase the demand for honey than any other little advertisement that we may get out.

About Heating and Clarifying Honey.

The greatest and most serious objection that most bee-keepers have to holding honey for the winter trade is in not being equipped to heat it and otherwise handle it with ease, speed and perfection.

We have no heating plant as yet because of a lack of sufficient knowledge, therefore we would like to submit our plans for your consideration and for your suggestions.

If it can be made to work, our idea of a plant for heating and canning honey with care, speed and perfection, would be something like Mr. Pouders' steam coil tank.

We should want the honey heated while it is in the settling tank. The honey would clarify thoroughly and perfectly in a short time. It could be canned or bottled at any desired temperature.

It would overcome the greatest objection to the honey pump. Some bee-

keepers have told me they would not take a honey pump for a gift because, as they expressed it, "It is a wonderful machine to make honey granulate in a hurry." We believe this plan can be adopted to any sized storage tank, but we would like ours to hold at least a ton of honey, round, narrow and tall in shape. This would be about two and one-half feet in diameter and five to six feet tall.

The heating to be accomplished by means of a hot water cail in the tank, and a tank heater connected to the coil by means of pipes through the walls of the honey tank. The coil to be so arranged that it will heat all of the honey without stirring it.

At the bottom of the tank we believe the coils should be close together, say, two inches up and down between each coil and six inches from the wall of the tank, and as the top of the tank is reached about six or eight inches between each coil up and down.

We should want the outside of the tank plastered with asbestos cement to a thickness of one-half to one inch, also a cover for the tank, the same to be also plastered with asbestos cement. This would help to retain the aroma and flavor of the honey.

After once being hot it would stay hot with a very little fuel and attention for a great many hours—fireless cooker principle.

We believe the fire could be so regulated that the honey could be kept at a very nearly uniform temperature for several days if desired.

A tank heater such as we have in mind is listed by Sears, Roebuck & Company in different sizes and prices. The size necessary for a ton tank of honey is a question with us. To illustrate what they are like a description of one will be given herewith:

Diameter of fire pot—13 inches.
Depth of fire pot—11 inches.
Tapping—1½ inches.
Gallons of hot water per hour—150.
Square feet of radiation supplied—120.
Height over all—31 inches.
Smoke pipe— 6 inches.
Shipping weight—295 pounds.
Price—$17.60.

It will burn any kind of fuel and need not be given attention more than once in twelve hours. An expansion tank will be necessary. This could serve for more than one purpose by being made and connected properly. It could be placed on the second floor of the building directly above the tank heater. It would serve as a funnel for filling coil and tank heater with water. Possibly it could be made large enough so that 60 pound cans of honey could be heated in same if desired.

It might also be a means of having hot water at hand as long as there is fire in the heater, etc. If a honey pump will pump honey two stories high we propose to have all the storage tanks in the second story and the heating tank in the lower story by means of hose and pipe. A tank full could be heated every two or three days until the entire crop has been heated and canned. If desired, a honey room could be built to store all the honey in after being canned, on the fireless cooker principle, plastered with asbestos cement and heated with hot water pipes.

With the proper connections, and if the capacity of the honey tank heater was large enough it could be used to heat the honey room also.

If the honey room were located on the second floor it might be to advantage to have all the storage tanks in this room. It is supposed that this room could be kept warm enough so that the honey would not granulate as long as it remained in the tanks and kept warm.

The final heating and canning of the honey to be delayed or done only as fast as the honey is sold.

If the pipes, heater, tanks and storage room were all covered with a liberal coat of asbestos cement, we believe the heat could be retained to such an extent that the amount of fuel required to heat same would be very small.

We must have some system to handle, heat, can and store our honey with ease, speed and perfection before we can take care of our honey trade or local honey markets twelve months in the year.

We are willing to go to some expense to work out this system and shall feel greatly indebted to any one who can give us any information and suggestions with reference to same.

Mr. Hassinger—After having submitted this plan to plumbers, I find it will be necessary to have the expansion tank large enough to take the capacity of the heater, otherwise the

water would get too hot. It would also be necessary to use hard coal.

President Miller—Gentlemen, you have heard the paper. It is now open for discussion.

Has anyone any questions to ask regarding the Clarifying of Honey according to Mr. Hassinger?

I would like to ask one question of Mr. Hassinger, myself—

Would it not be cheaper in the first installment, and more convenient, to use steam than it would to use hot water in the heating of this honey? Steam could be produced by gas or gasoline; a small heater would be all that would be necessary, the steam being condensed after it passes through the honey tank.

Mr. Hassinger—I always understood there was too much danger in using steam in heating honey as you have to watch it too closely.

Mr. Miller—President—Anyone had any experience in using steam in the heating of honey? Passing the pipe through the honey tank? I would like to hear from any one who has had experience in this line.

President—Miller—Anyone ever had any different way of clarifying honey?

Mr. Bull—How do I understand you would heat honey in sixty pound cans?

Mr. Hassinger—Honey bought in 60 pound cans, you have got to heat it in 60 pound cans if granulated. Sixty pound cans would work in this heating system.

Mr. Bull—Your idea is to take the honey as you produce it instead of sorting it in 60 pound cans; put it in large storage tanks; heat it up and then can it as desired.

Mr. Hassinger—If you only had one tank and only extracted it as fast as you could store it in that tank and then heat it and can it, that would work.

Mr. Bull—I have exactly the same plan under consideration you have. Instead of using coal I use acetylene gas. If a person had a house with hot air furnace, could you not get sufficient heat from the coil?

The ordinary hot air furnace in the home has a coil—one pipe going in and one going out that supplies the house with hot water. Could you not get sufficient heat by a pipe running in your tank and out again? In that way you could get your heat for nothing. Any time you could not have that, you could have a gas heater connected with your motor system.

Mr. Baxter—I think there would not be any question of getting enough heat but too much heat.

Mr. Hassinger—Have expansion tank large enough so as to have enough water circulating to keep from getting too hot.

Mr. Bull—If you could have heat by gas, you could regulate your heat to the scratch; set it once and get it going right and let it go. Instead of canning up your honey in 60 pound cans—run extracted honey in large storage tanks and keep it warm enough to keep it from granulating; then put it in your small cans and sell it.

President Miller—I would like to hear from those who have not so much honey to heat.

Mr. Bunch—I do not heat it; I put it in tin pails and sell it that way, except we put some up in pint glasses.

I think it is a mistake to put honey up in glass; the glass bottle is liable to break; and they cost more than tin.

Ten pound pail, with nine pounds of honey I think is a good package.

President Miller—Depends on the trade you have; a good deal a matter of education. If you educate your customers to buy in glass packages, that is what they will demand, and others want tin.

Mr. Bull—In regard to glasses and tin, I might say I have used tin exclusively for several years; have used glass more or less for the last year. You ask the average consumer whether he desires honey done up in tin or glass, for the same weight of honey, there is not one in a thousand that would take the tin.

You set that glass jar with 6 pounds and six pounds of honey in tin, and ask for the glass jar $1.00, and for the tin, $.75,—they will take the glass, and they will pay $.25 more for the privilege of getting the glass.

President Miller—We have with us Mr. Snyder, from Auburn, Indiana—Will you tell us what your practice is in preparing honey for market?

Mr. Snyder—We have, like other bee men, our methods of doing business. They may not be the best yet we do them, consequently we generally work out our own way as best we have been taught.

When it comes to heating honey: We heat our honey in a tank with hot

water jacket below it and heat our honey as we wish to bottle it. We bottle our honey for the trade, and I think I would want to take exception to the method already explained of having a large tank and keeping it warm that it would not granulate but heating to the extent sufficient to keep it from granulating after it was bottled.

Our experience would indicate that our honey in our locality, after it is being heated up to a high temperature, deteriorates in flavor and quality, and if practiced to a great extent will lose its color—so we take exception to that plan. It may be it would be all right, but our knowledge is not sufficient to warrant it.

If there is any method in putting it in large tanks and heating it as you use it, I wish the gentleman would explain how to keep it from losing flavor and color and fragrance.

Mr. Bull—At what temperature do you heat your honey when you bottle it?

Mr. Snyder—That varies—How long it has been since we extracted; in the early part of the season, 130—At that time the honey has not granulated; if it shows signs of granulation,—140. If in winter, and the weather is cold, run it up to 160—but don't let it stay there. Let it cool down as gradually as possible.

Mr. Bull—I do not know what idea Mr. Hassinger has in view but my idea of storing in large tanks: If you keep honey hot very long it will lose its honey flavor.

In my opinion 120 degrees heat in those large tanks would be the extreme you would have to go—130 on the outside; I never go above 130. Usually have 60 pound cans, so that I can handle them with my bare hands without any discomfort.

120 to 130 degrees, the average temperature you can stand on your bare hands.

The object of putting it in large tanks—not allowing it to granulate—If you keep that temperature to 100 degrees it never will granulate (at an even temperature); I believe they keep comb honey at 85 degrees.

President Miller—Some bee-keepers do not have sufficient quantity of honey to make it pay to heat in large tanks.

Perhaps Dr. Phillips can give us some pointers in regard to modern methods of heating and clarifying honey.

Dr. Phillips—Dr. Phillips can add nothing except as to the coil through the middle—I never saw Mr. Pruder's plan in operation in Indianapolis, but understood there was considerable danger in running a steam coil through the honey, in scorching the honey. I do not know whether that was actual experience or criticism somebody made. It seems to me it would be simpler all around to have double boiler.

President Miller—My impression is it is double boiler. Homer, of Philadelphia, has a double boiler, and I think Mr. Muth, of Cincinnati. Stir the honey while it is being liquefied.

Mr. Haskins—Would that be automatic stirring?

Mr. Phillips—Yes.

Mr. Hassinger—Of course, being below the surface I don't suppose it would agitate it enough to lose much of its flavor.

Dr. Gates is making a model plant at Amherst; he has a paddle almost on the bottom of the tank.

Mr. Hassinger—It seems to me a year or two ago I wrote to the Root people inquiring if a double water jacket tank could be heated that way and they wrote me that it would take too long a time.

So I thought the only way around it would be to have hot water coil.

Dr. Phillips—You could heat your double boiler with steam coil if you wanted to .

Mr. Hassinger—On the outside?

Dr. Phillips—Yes.

President Miller—On heating honey for bottling in a small way—for the fellow who has only a few hundred pounds—can some one give us a few pointers on that? Most of us have not tons of honey perhaps, or at least we have not carloads of it.

Mr. Lyman—I would say there is a laundry stove made that has a water jacket; simple connection, gas pipe with tank makes a very nice heating arrangement, for small use, say up to 500 pounds.

President Miller—Any one else anything to say?

Mr. Kannenberg—Lately I have not been very active in the honey business, but I dissolve my honey in a double boiler. I have got a boiler that holds water on the outside and heat it with

gas. I keep it in there for a while and bottle it.

Mr. Stewart—A man who has only 500 or a thousand pounds can sell his honey without bottling it.

Mr. Hassinger—How large a tank?

Mr. Kannenberg—Holds 500 pounds.

Mr. Bull—How large space?

Mr. Kannenberg—About 5 inches space of water around it.

President Miller—In order to keep honey from candying it is necessary not to stir it after it is heated.

I find it sometimes convenient to pass through a settling tank first after we draw it into bottles and heat the bottles in the boiler, that is if you only have a very little common wash boiler; have the temperature about 150 and allow it to cool slowly. That will keep a long time without granulation.

We have to have better methods if we have a larger business—larger and better apparatus.

Mr. Kannenberg—I have kept my honey after I have heated it up for three or four months standing in the same kettle and it never granulated.

Mr. Bull—I think that is the idea of heating. I believe I can take honey put up in small tin pails, after having been thoroughly heated and all the air gotten out of it, and it will stay without granulation for a year, or until I get ready to use it.

A member—To what temperature do you heat it?

Mr. Bull—120 degrees, to get the air out of it, and it will stay liquid until you get ready to use it.

Mr. Hassinger—I should like to know how large bottlers bottle honey; at what temperature they bottle it, and how they do that without getting air into the honey again; even hot honey, by draining it from the faucet into another vessel, would get bubbles.

Mr. Bull—I had Ernest Root explain their system. Instead of drawing honey from the faucet—they have a goose neck in which they drop it and they have no air bubbles; you take a small bottle of honey, I don't care how hot you heat it, that will cool before the air bubbles get out of it. I have had another plan: After filling those bottles put them where it is warm, 120 degrees, and leave them there for a day or two.

Mr. Hassinger—Mr. Bull just explained my plan—having honey in a warm honey room; put your honey in bottles and then have a warm honey room in which to store them; keep it in that room any length of time you desire—until sold.

Mr. Bull—The Root Company use slow heat until they get ready to bottle that honey; they bring it up to 160 degrees quickly and bottle it right away.

In regard to air making honey granulate, that is the idea of the honey pump.

Mr. Hassinger—I would like to ask whether the honey pump will pump honey up two stories, 12 feet or so?

Mr. Bull—If you have power enough you can pump it 100 feet.

President Miller—Any further discussion on this subject?

A member—I use hot air for my liquefying; if the can is real full I turn it upside down a little while; it does not injure the flavor or color—5 gallon cans.

President Miller—The next we have on the program is the appointment of committees—what is your pleasure, gentlemen?

Mr. Kannenberg—I make a motion that we have a Committee on Resolutions, of three.

Motion seconded and carried.

President Miller—How shall this committee be appointed?

A member—I move the committee be appointed by the President.

Motion seconded and carried.

Mr. Kannenberg—I make a motion that an Auditing Committee be appointed.

Motion seconded and carried.

President Miller—For the Committee on Resolutions I will appoint Mr. Kannenberg, Mr. Wheeler and Mr. Sievers.

Mr. Kannenberg——I make a motion that the President appoint an Auditing Committee.

Motion seconded and carried.

President Miller—I will appoint on the Auditing Committee—Mr. Mace and Mr. Hassinger.

Question—Is it possible to have your hives just before the honey harvest filled with 18 frames of Hoffman size brood; if so, how can it be done?

Mr. Baxter—Have to have two congenial queens I think.

President Miller—I think it is done in many cases but we cannot always do it; have plenty of honey in the

hives when you start in the fall; have good winter conditions.

If you have all the conditions as good as you can get them, you will find there will be lots of them that will not be there.

Question—What can be done with the loafing colony in the fall?

Mr. Wheeler—Give them more bees.

President Miller—With bees hanging out in front, I don't know how we could give them more bees; when they get ready to swarm they want to get away so there won't be so many bees.

Give them more ventilation—more room.

Mr. Stewart—Break the capping of the honey in the brood nest.

Mr. Davis—Give them opening in the center; take out the center comb and place in there an empty comb or brood foundation right in the center. It will help.

Mr. Williams—A good many years ago they had a good honey flow near me and I noticed whenever they manipulated the bees they went to work; I tried it. I took six colonies and whenever they would get to loafing I would give them plenty of room, always above. I would take them out and shake them on the ground in front of the hive. Mr. Hutchinson laughed at me about it—about shaking the bees.

Well, I don't know if that was what did it or not; but with those six colonies I made 1,300 sections.

The next three or four years were bad years. I didn't shake any. But always give them plenty of air, give them plenty of room above is my theory.

A new swarm always gives best results—work harder and longer and gather more honey.

You can shake a colony into condition that will swarm and if you do that you will cure them from loafing. I am going to try it; I found it gave good results in three or four colonies —of course it was not a good season. These bees gave me twice the amount of honey the others did.

President Miller—I don't have any loafing. Put the queen below with one frame of brood; put the super above the queen excluder; the rest is empty comb or foundation; they will go to work and work hard.

Mr. Simmons—It has been my experience, and I seldom have it fail, to stop loafing by giving more room and plenty of ventilation; I seldom have it fail.

Mr. Coppin—Mr. President, do you work for extracted or comb?

President Miller — Extracted and comb.

Question—What is the best plan to conrtol foul brood?

President Miller — We have two kinds of foul brood; suppose we discuss American first. What is the best plan to control American foul brood?

Mr. Frank—I have had a little experience since I wrote that letter to Dr. Miller. This last summer I think I have cleaned up about all I have; it took me about three years to do it. The method I used in doing it of course may be improved on; others may have better methods but it worked all right with me. The way I did was to take the worst colony and set it off by itself somewhere. Put another story on top of that; all the other foul brood frames I run across on top of that; let the bees hatch out; then take the frames away. In time I had a pretty good colony. I cleaned up 12 colonies that way this summer. I did not shake the bees. I gave them one frame of foundation; set them in the middle of the hive and let them work on that possibly four days; then took out the other frames and gave them new foundation and let them work on that a while.

Then take out center frame and destroy that. That was American foul brood.

With European foul brood I think the only cure is to kill the queen. I had a little experience in that. I had one colony; they had both American and European foul brood. I read so much and heard so much about Dr. Miller caging the queen and giving her a rest for eight or ten days, and then everything would come all right, I took it for granted in caging the queen the queen needed rest; I took this queen and put her in queenless nucleus; it was not long after that I found disease followed her.

Then I had another queen that I was about to discard; I introduced her into this colony where I had European foul brood and it seemed that she cleaned it right up; there was nothing left of it any more. I did not shake this; I took the frames away.

I thought by giving them new foun-

dation that would cure European foul brood anyway, but it only cured the American, not the European at all—so then after that, why, if I ever run across a European foul brood colony I will know what to do. I will chop the queen's head off.

President Miller—In the treatment of European foul brood, the suggestion given by the gentleman is all right, to kill the queen.

I have gotten rid of foul brood in my yards—have not had any for two or three years, in some yards, four or five years.

When I find a case of European—I do not wait until it gets too bad; I kill the queen; nip her head off. In about two weeks, set that hive on top of another hive, and they will clean it out before they put the honey in—very thoroughly.

A member—Don't you clean the combs again?

President Miller—The bees do it. My theory is that European foul brood is transmitted (I may be wrong on that) by the bees feeding dead larva to other larva. If you kill the queen, leave it a couple of weeks, that larva will be cleaned out or nearly so; they will not feed it to other larva.

The most important point in the treatment of European foul brood is to have good Italian stock; they must be resistant stock. I do that by process of elimination. When I kill that queen, that ends that lot of bees—set them on top of other hives where they have any European foul brood, I have got rid of the bees that are susceptible to disease.

I worked that for a number of years, and I have gotten rid of European foul brood, at least I think I have; I have not found any for three years in all of my yards.

A member—I move that we adjourn.

Motion seconded and carried, and Convention adjourned until 1:30 p. m.

AFTERNOON SESSION.

FIRST DAY.

Convention convened at 1:30 p. m. Called to order by the President, Mr. Miller.

Mr. Kannenberg—As I understand it, if we pay $.25 more with our dues, we will get the Bee Journal another year, and the Gleanings.

President Miller—We have arranged with the American Bee Journal and with Gleanings to give a free copy of either with every $1.00 membership paid to the Association for one year.

We have a letter from James A. Stone, Secretary, Illinois State Bee-Keepers' Association, as follows:

"Mr. John C. Bull,

Secretary-Treasurer Chicago Northwestern Bee-Keepers' Assn.

"Dear Sir: I write to inform you that our executive board have arranged with the American Bee Journal and with Gleanings to give a free copy of either of the Bee Journals, with every one dollar membership paid to the State Association, for one year; and, with each fee of $1.75, both of the above named Bee Journals will be given free for one year.

"This does not prevent the affiliating societies at the old rate, of 50 cents, and the cloth bound copy of the report."

Mr. Kannenberg—How do we understand that; if you are a subscriber of the American Bee Journal and Gleanings—does that come in with the Review?

President Miller—It seems the Review is not mentioned here.

Mr. Bull—It has been the habit ever since I have been attending here, to join the Illinois State Association in a body at $.50; the regular dues, if sent in individually, would be $1.00. Joining in a body we get a rate of $.50—as near as I can understand this letter: By sending in $1.00 membership instead of $.50, you get a copy of Gleanings or the American Bee Journal; and, if you want both, $1.75 to State and $1.00 here.

Mr. Wheeler—That does not include the National.

Mr. Bull—No, the National is $.50 and the Review $1.00.

President Miller—If there are no further questions, we will hear from Prof. Francis Jager, of Minneapolis, on the question of National Problems.

NATIONAL PROBLEMS.

(Prof. Francis Jager, Minneapolis, Minn.)

Mr. President, Ladies and Gentlemen.

I am here to say a few words in behalf of the National Bee-Keepers' Organization. This subject I must confess has been misunderstood and

its importance has not been thoroughly sized up.

We, as bee-keepers, are still figuring things on a small scale, whereas we live in a big country.

We are trying to do business by teaspoonfuls, whereas we have to face a problem of tablespoonfuls, and unless we begin to think in larger figures and expand our point of view we will never make any progress.

There was a time when we were thinking in pennies; a time when we played marbles behind the school house; when we were boys we were thinking in dimes; later on, in dollars, and that is about as far as some people go, while others go further and think in hundreds and thousands of dollars.

Our bee-keeping industry and our bee-keeping fraternity is still thinking in pennies.

The National problems of bee-keeping are so great and of such tremendous importance that sooner or later we will have to come to time if we ever want to realize anything out of our honey.

I was talking to a big buyer of food stuffs for a wholesale house, and he tells me there are only three (3) articles on the market which have never advanced in price this year—coffee, rice and honey. These three articles have remained stationary—rice from China, sugar from South America, and honey from the United States.

Honey is the only product in the United States today that has not advanced in price—simply because we do not know how to go to work; we do not know how to advance our business.

We are experts on knowing how to run our hives—how to liquefy honey—how to bottle it—how to make comb and extracted honey of the finest quality; we are experts in that. You can find such bee-keepers all over the country, but when it comes to making money out of honey—how to best dispose of your honey and make money out of it, we have entered on new ground where we are strangers.

Now, I have said to the National Bee-Keepers' Association, something must be done to improve our conditions. We want more money for our honey.

We are keeping bees by the hundreds and bees by the thousands—what is the use of all this if I don't get more fees out of my bees, and having big conventions and gatherings, and big field days where hundreds and thousands of people attend?

We come to imagine we are a great body; we make a big show but I will again say we want more dough for our show.

Now there are some problems, gentlemen, that a State organization or a little bunch of bee-keepers cannot solve. You cannot do it; Wisconsin cannot do it; Minnesota cannot do it—because we are only a fraction of a big country, and a fraction cannot rule or dictate to the majority; or, in other words, the tail cannot wag the dog; it must be the other way.

In bee-keeping a colony of bees with a nucleus of 30,000 bees will starve where perhaps one of 80,000 will give you much honey.

We have got to unite so as to be strong and powerful. How to unite? That is the question. By newspaper method or some other way but, anyway, this uniting is absolutely necessary.

I would like to inform you that the National Bee-Keepers' Association Convention is going to be held in Madison, Wisconsin, February 6th and 7th; you being so near could go in a body and see what we have up our sleeve and what we are planning to do for the future. It may take ten years of educational work to start bee-keepers to work on a large scale—but now, what are some of the things that only a large National organization can solve?

In the first place—just think of the gathering of Nationally great men like in Europe? Once a year they travel (at least they did before the war) from England, Germany, Spain, Russia, Australia, Italy, and gather in some big city and discuss bee problems, and the progress of bee-keeping in Europe is traceable directly to the representatives of all those European nations meeting at one place and discussing points of interest.

Do you know what they have done in the matter of prices?

Only in Europe they do not cut each other's throats like we do here. Honey was selling in Australia before the

war started at thirty-three cents, American money, a pound for extracted, where all the other food stuffs are much cheaper than they were in the United States. Thirty-three cents a pound for extracted honey in Europe? The prices in Switzerland are slightly higher, but honey always brings a paying return to the bee-keepers in Europe. Why? Because they are organized, or they were organized.

And now during this war—our honey is going to Europe by the carload— is going there at the rate of 35 and 40 cents—simply because we do not know how to market.

Once a year the big men of this country ought to meet in the United States and talk matters over. If we have no National Bee-Keepers' Association, we will be scattered here and there and we will not obtain results.

The National Bee-Keepers' Association has to take up some political activity—I am a firm believer in State and Government aid. I do not believe we ought to spend our money doing organizing work. I believe the Government and State ought to do it. They have done it for others. Why not for us?

Don't you think if properly approached the Government will do something for us? They are beginning to do it. Last year, in Washington, they appropriated $5,000 for bee-keeping in America. We just asked for it and they gave it to us.

Take our state of Minnesota—We have been hammering at our legislature and asking for more and more and more—and $11,000 a year we have now got.

To do this, however, gentlemen, we have to be organized.

When you go before the politicians—you have got to be organized. When you go before the Senate and Legislature and Finance Committees—they look at you first and you feel like being pigeon holed right away, and then they look so indifferent and worried—not worried, but bored. Then you say to them: "Gentlemen, we are here, a committee of three, representing 20,000 Bee-Keepers of the state," and right away, the moment you tell them there is somebody behind you, then you are a power—and alone, no matter what your name, you have as much show before the politicians and legislature as a queen would have in a hive without bees to raise a colony. It cannot be done.

Now, to have our state aid, we need strong state organizations, like yours, well organized, so when those gentlemen go to Springfield, they say: "We represent (you have about 20,000 bee-keepers in the state) 20,000 Bee-Keepers in this state, and this is what we ask"—and they give it to you.

When you go to Washington, and ask for Government appropriations for our industry, you must state we have so many thousands of people standing behind us, and then we will get it.

What do we want from the Government?

First I may speak of the educational work which is going on today. Dr. Phillips has a large force of men to do the educational work. Some object to education. Probably we don't want any more bee-keepers but we want those we have educated. We have too many ignorant men, who never subscribe for a paper, never attend a Convention, never join an Association, men who never read, men of that kind, we have too many of those. Now if we do not keep educating, the conditions are going to remain the same. If education goes on the future bee-keeper is going to be intelligent, and, while ignorant men are dying off, they will be replaced by educated men.

In Switzerland they take the bee census every five years.

The Government appoints enumerators and a complete census is taken of every bee-keeper, hive, condition of bees, amount of honey produced; and the Government publishes a nice book giving out this information. The Government is doing that in Europe.

Do you know, gentlemen, how much show we had before our Government here? Of course the census was taken in 1910, but only those bees were enumerated that were outside of city or village limits, and therefore the government census was absolutely worthless.

You people who are gathered here and who brag about what great men you are, the Government credits you with 5,000 pounds of honey per colony, that is your average which you produce.

Those things will continue just as long as you remain where you are and do not take up things on a large na-

tional scale and make those people, who live by our taxes, make them do what you want them to.

I met Secretary Houston of the Agricultural Department of Washington, in Minneapolis. A committee of three were going to him to see why the government does not do its part by the Bee-Keepers. I took the blue book of the government. There they had everything in its own department—every bug—every weed in creation in that book, and looking through it, from cover to cover, I could not find the word, "BEE."

I said to Mr. Houston—"Mr. Secretary, how is that?"

He said to me—"Now, gentlemen, I will tell you, you are the first bee-keepers I have met in my life. Sit down and tell me something." He was anxious to learn.

We cannot blame the authorities—the blame is with us because we are not organized; we must approach those people in such a way that they will know we are somebody.

Now, there are other problems that face us on a large National scale that we cannot solve alone, but a large body of men have to be working all over the United States.

State Aid and Government Aid for Bee-Keepers.

The production and over-porduction of honey in the United States.

Freight and express rates.

Educational and research work in bee-keeping.

How to increase the consumption of honey, or the methods of increasing the consumption of honey.

Of course, on a big scale, the State alone cannot determine it. You have to take this in connection with the whole world.

The United States maintains a number of well paid men, the finest business brains that can be got for a large salary. They maintain several hundred of those men in every city and town of large size in the whole world. There is not a spot in the world where they do not maintain these men—pay them big salaries—for what? Just for what we are worrying about; and it is their duty to do this work. They have to find the markets for our production; that is their business, finding markets for our production. They send in reports from every corner of the earth—how much honey is produced in Russia, Japan, Italy—they send in those reports if they are wanted.

Ask your government if you get them. No, and blame ourselves we must for it. We are not big enough to go after those things.

By the reports that come in from the whole world, we could easily figure out whether there is an under or over-production of honey. Could we not figure out where there is no honey—where honey could be shipped?

Suppose we had a tremendous crop of honey in this country and they have none in England, Australia, Germany? We can get all this information free of charge from men who are paid to give it to us.

We have got to have a National organization, and I still believe the time will come when we are going to have a Financial Agent, a man who is paid a salary, to keep us informed as to honey, its under- or over-production; and we will be able to dispose of our honey as soon as harvested.

The National Bee-Keepers' Association must take care of these things and see that the bee-keepers get a better price for their production. We want more money for our honey. More fees for our bees—more dough for our show.

How will the National organization do that?

I do not know. We have got to work out those problems. We are beginning to work on them.

To show you an instance of how much we need a Central Bureau of information connected with the National or some other way:

Look up your last July quotations of honey. Just for curiosity I cut them out from different papers. Gleanings says: "We are offered white clover honey, $.07½." Eastern dealers offered 7 cents, and bought it for less. Minneapolis daily paper, Minneapolis Journal: "Choice white clover honey, 11 and 12 cents; dark, 8 and 9 cents."

Dadant's American Bee Journal—"11 and 12 cents" for white clover.

There were quotations from 7 to 12 cents; five cents difference in quotations.

Now, what is the price of honey?

They say supply and demand regulates the price. Does it?

If supply and demand regulates the price, honey ought to be twenty cents a pound just now because there is big demand but no supply.

We have no honey in Minnesota. In Michigan it is all gone. Even if there be any honey in the country we have not enough to last only to February.

What are we going to do for honey five months before harvest? You will not have it. In the meantime the people of Illinois will forget to eat honey because they never see it. Then when August comes, and your crop, you have to educate them all over again.

The success of honey eating is to keep it before the public twelve months in the year, and we cannot say anything about the supply being too big until we can supply them with honey 12 months in the year.

Now we are supplying them five months, and in the state of Minnesota I never knew a time when we could supply them after Easter.

The demand exceeds the supply today, and it sells for seven cents a pound.

For instance take our coal: In the spring it is $5, in February; in April and May, $5.10; in June, $5.20; in July, $5.30; in August, $5.40. Well, why should coal just begin to go up in price in the spring and quit in the summer? The demand is smallest in the summer, and still it keeps climbing all summer long; and whenever there is a chance it keeps jumping up higher and higher—because the coal men are organized and understand what the price is going to be. They have agreed you have to pay from April to September 10 cents more a month. If you want to pay it, you get it, and if you won't pay it you don't get it.

It is not all supply and demand; there is another item in the regulation of prices—manipulation. For instance, the price of food stuffs can be manipulated. There are all kinds of tricks of trade besides supply and demand.

Now, how shall we increase the consumption of honey throughout the country? We talk about co-operation and buying and selling—great problems discussed but not solved.

We talk about Foul Brood—such as cleaning up our neighbors. Is it not time we took the matter up seriously?

What about County Inspection of Foul Brood? We have to go after that if we want to eradicate it.

Then the National Bee Census. Do you think we ought to have a bee census in 1920 so that the bee census will be really a census and show something about the industry?

But they won't do it unless we go after them, and we have to have a National organization.

In State Fairs and Exhibits. What is being done throughout the United States? Is there a system, a plan, or anything being done in that line? Very little.

Honey and Wax and Commerce.

What do you know about it? All we know is that people use so much honey and sell it. Would it not be interesting to find out where our honey and wax go? How much to tobacco manufacturers. How much to biscuit manufacturers, to syrup concerns? Let somebody investigate and find out every place that honey goes.

If we could size up all the markets, all of the places where honey goes, you would find out honey is a big commercial article, bigger than you realize—the same as wax. The commercial importance of wax. At a honey bee exhibit in 1913 they showed thirty-two uses of commercial wax; thirty-two different manufacturing systems where wax is being used.

How many do you use? I know one —Foundation—I know of only four, and that would leave twenty-eight more.

Then standards of packing and shipping. How are we going to pack and ship our honey? Two and one-half first class rate by freight they charge now. Do the railroads know about bees? How ignorant they are in the rates they charge. The National can fix those laws.

I bought a colony of bees and shipped them seventy-five miles; sent my man down to pack the bees and put them in the car; went to the commercial agent and got rates—the whole car with 14,000 pounds came to $36.75.

I looked at those bees—they were black bees with crooked combs, but heavy; each hive weighed 60 or 70 pounds—something like 180 of them. Bought those bees for $1.40; I thought what is the use of monkeying with

those bees—I will make what money I can out of extracted honey and wax. The agent of the Chicago, Milwaukee & St. Paul said to me: "If you ship those bees alive it will cost you $36.75 the car, but if you kill the bees and just ship honey and wax it will cost you $87.50." I shipped those bees alive, and it was a bigger risk for the railroad.

We have some work to do with the railroads. The matter is up before the Railroad Warehouse Commission now —but it takes a National organization to do this.

Then comes Substitutes for Honey. Only a National organization can investigate there.

Do you know what is being used for substitutes now?

There is a big firm now manufacturing honey syrup—50 per cent Porto Rican honey and 50 per cent corn syrup, and they are putting it on the market by carloads.

How can we compete against that stuff, where it costs only one-third what the honey costs? And this factory that is manufacturing that stuff is going to push you to the wall.

Those matters should be taken up by a National organization and see what is to be done to protect the bee-keeper.

Then there is the matter of containers.

Who is going to furnish the necessary containers? Glass and tin is going up tremendously. There ought to be someone to make investigation of the factories where those things are made and let us know if next year we can ship our honey at all.

I asked a factory that makes jars if they would not cut the price. They told me: "If you want goods delivered you have to order them now." They are pushed for work and the prices are climbing. Next year when you want containers for honey, the chances are you will not get them. Mason jars are selling for $1.00 a dozen.

What use is your honey to you in big tanks if you cannot put it on the market; if you have to pay such a big price for containers that you cannot sell your honey at advantage?

Then there is: Quotations on Honey —Imports and Exports. There is no end to those problems, ladies and gentlemen, that the National ought to take up.

I am sorry to say that more or less misunderstanding about the National has been in the past. Many people are somehow prejudiced against the National, but I believe the office of the National is useful to its members in constructive research finding out facts for your use and information, and it ought to help the bee-keepers of the United States to get together and agree on the fundamental success of our bee-keeping fraternity, but, as long as we are fighting as we are now, our prices will get lower and lower every year.

Minnesota is not a comb honey producer so we have no grudge against those that sell it, but the little comb honey that is produced in the state of Minnesota has been selling in Minnesota for sixteen cents No. 1 fancy; and our big stores have been buying it at that price for years and years and charging the retail trade $.25.

About three weeks ago I came to one of our big stores and saw some beautiful A. No. 1 fancy honey on the counter. I looked at it—C. H. B. A. Colorado honey. I said to the floor walker whom I knew well: "That is some beautiful honey." He said to me: "You know how much I paid for it?" "You probably got it cheap—about thirteen cents?" "Less than that," he says, and he winked at me, which means that he got it below all expectations. He paid for it 10½ cents; 10½ cents in Minneapolis delivered. After the freight was paid from Colorado, the packing and hauling—how much do you think the bee-keeper in Colorado got for it? If he got 8½ cents or nine cents for fancy, he was doing well.

I wish Colorado would send lots more; we have to have it in Minneapolis—but I do say one thing—it was unnecessary for that honey to be sold at nine cents, because those firms in Minneapolis used to pay $.16 for our honey; he could have gotten $.15, and it is simply because we are not organized that he did not receive more for his honey.

I discovered a man in Michigan who sold a carload of honey for six and one-half cents. When he sells it at that price, why does he do it? He thinks, if I don't, some other bee-

keeper will sell it and I won't be able to; but that is not so.

This we think because we have no one to lead us or advise us, and if we had a National Board of Quotations—the amount of honey would be gathered from the whole United States, and a shortage or surplus could be seen at one glance, if the National Bee-Keepers' Association would send you out quotations showing you the real condition of things, and the bee-keepers would know how much to charge for their honey.

I do believe if any one of you are fortunate enough to have any honey left you may get a better price. Now there is no one to lead or advise. We are like a flock of sheep, and it is time we get together and organize and get a little more money for our honey.

President Miller—If there are any questions I am sure Professor Jager will be glad to answer them. I would be glad to hear this question discussed.

I might say that Mr. Boyden informed me a short time ago that the reduction of the rates on western honey had been granted; it will be sent through as first class after the 25th of next January.

If you have any questions in regard to the sale of the honey or an organization such as has been suggested, I will be glad to hear them.

We have Mr. Muth (Jr.) from Cincinnati. Mr. Muth?

Mr. Burnett, could you give us a few remarks in regard to the marketing of honey?

Mr. Burnett—I do not claim to be an authority on those things. I think the President got me up here so you might have a look at me and blame me for the low price of honey.

You have heard Prof. Jager. Now I wish to say to you that I enjoyed his talk very much indeed; it is a beautiful theory not yet in practice. Yet I think if we had one hundred such fellows as Prof. Jager it would be in practice within the next five years—give them lots of time. The Professor has an excellent vocabulary, and while he informed you very precisely that there were lots of tricks in trade he did not tell you about any. He is quite up to date. Nevertheless, I wish to ask of you all to support him because you must have warships to command, and he certainly is carrying heavy caliber, and it will bring down, I was going to say, prices; no, it will boost the prices if he has his way about it.

He, however, touched upon the serious problem of educating the bee-keeper. Really that is fundamental; you must have the bee-keeper educated, not only to get honey, but you have got to be sure before you trust anybody that he is worthy of trust.

Bee-keepers as a class are very distrustful.

Now I am simply talking from my experience, and perhaps they have justification for it—

We had a man send us a lot of honey. I will not put the low price of twelve cents but I will say fifteen, which I get for the best grades of comb honey at the present time where I am not undersold by somebody else, which is true in this city. It is being sold for almost as low, if not quite as low, as Prof. Jager told you it was in Minneapolis.

Those people who are selling that honey—they have got more honey than will be sold. That depends upon the consumption and that is an unknown quantity, but according to Prof. Jager it is all consumed in Minnesota; there is none left.

We have some coming from there now. He didn't know about that though, I guess.

Then a neighbor of his who got fifteen cents for his honey and shipped his in and we sell it for twelve cents—he wants to know why he didn't get as much as his neighbor did. The fact is his combs were crooked, had rubbed, and were in more or less a leaky condition and gave us a great deal more trouble than the honey that sold at fifteen cents. Much of it we have to clean up and sort over. We wish we had never seen it, you know.

Then we get less out of that than that we sold for fifteen cents.

Much of it we have to clean up and sort over and for this we get less money for our trouble.

This market problem certainly is an important issue—if the honey producers in the country were all in the hands of one organization, as Prof. Jager would like to have it, they can set the prices on it, like coal. I don't know whether they did or not, but it looks a good deal like it—therefore you could get that price for all the

honey you sold. If you did not sell it all, you would have the honey, and after a little experience you would know how to manage to keep that honey, not only for six months but for as long as you desire—then there would come a time when you could probably sell it, as was the case in some localities this year, where they have in years past produced lots of honey, there is scarcely any.

All of these things, as you have heard today, can be managed. It is a question of evolution in the bee-keeping business as in everything else.

Evolution is the crying thing of the age. We are all evoluting, some of us perhaps faster than others. These things are all necessary—all help along.

I think we should get twenty cents a pound wholesale, retail at twenty-five cents.

There is more or less breakage that the retailer has to bear with comb honey, and when people get to know that they can get extracted honey that is pure, not adulterated with any foreign matter such as glucose, it will then be in demand and it will probably sell for fifteen cents a pound in a wholesale way. It ought to bring that now; it is worth the money.

By the way, I find this year that Mr. Chairman, Ladies and Gentlemen:

My subject this afternoon is "Ex-

the price of butter, especially, being so

tension Work in Bee-Keeping."

high, that we are selling lots more of the extracted honey. They are using it on bread instead of butter, and I think it is one of the reasons why there has been a better demand.

Quite unexpectedly extracted honey is higher today than it was thirty, sixty, ninety days ago, by a cent or two in some instances, a pound.

I see that Doctor (Phillips) has arrived. Mr. President, I will politely give him the floor.

A member—I would like to ask him a question: I would like to have him tell us how far that net rate is working in the trade in general. In my state I was wondering what to do about it. In some cases it is a great help, in other cases it is not. I think the gentleman could give us valuable information along that line—the net weight law.

Mr. Burnett—I think that nowadays where honey is put in frames with almost universal weight, the same, that the law has not benefited greatly.

President Miller—We will have ten minutes intermission, after which we will hear Dr. Phillips.

President Miller—(After intermission) We now have an address by Dr. Phillips, of Washington.

EXTENSION WORK IN BEE-KEEPING.

Mr. Chairman, Ladies and Gentlemen:

My subject this afternoon is "Extension Work in Bee-Keeping."

Last December, while attending the semi-centennial celebration of the Michigan Bee-Keepers' Association, at Grand Rapids, the after-dinner toasts seemed to offer opportunity for discussion of a topic somewhat out of the ordinary for a convention of bee-keepers. It seemed appropriate to give expression to an opinion concerning the ways in which bee-keeping is to advance. Bee-keepers all realize that it must advance. It was pointed out that past and present bee-keepers have toiled laboriously to get the information needed for their work and that the present methods of learning bee-keeping are too slow and too uncertain.

Bee-keeping is often a sort of a tradition handed down from one bee-keeper to his successor. There are the books on bee-keeping but most of such literature is not pedagogically correct. A few schools and colleges offer courses in bee-keeping but these reach relatively few. The bee journals are not edited primarily for the giving of the fundamentals of the business. The bulletins and circulars on bee-keeping from Government offices do not reach enough people, nor are they the most effective method of presentation.

The apiary inspection system is probably today the most efficient, extensive instrument for the teaching of bee-keeping, and this function is a mere side line of the work.

In the talks of the Michigan meeting last winter, it was prophesied that the present methods of instruction would be replaced by more efficient methods. Professional bee-keepers are not being made fast enough, and without an increase among the professionals bee-keeping cannot advance.

A brief quotation will make clear one obstacle in this advancement: "Any bright boy ought to be able to learn the essentials of bee-keeping as practiced by our best bee-keepers in a year,

or two years at most. A young man spends four years in medical college, gets a little hospital experience and possibly treats you when your life is in danger. Surely he has had to learn more in his brief preparation to care for a complex human organism than the bee-keeper has to know to produce honey."

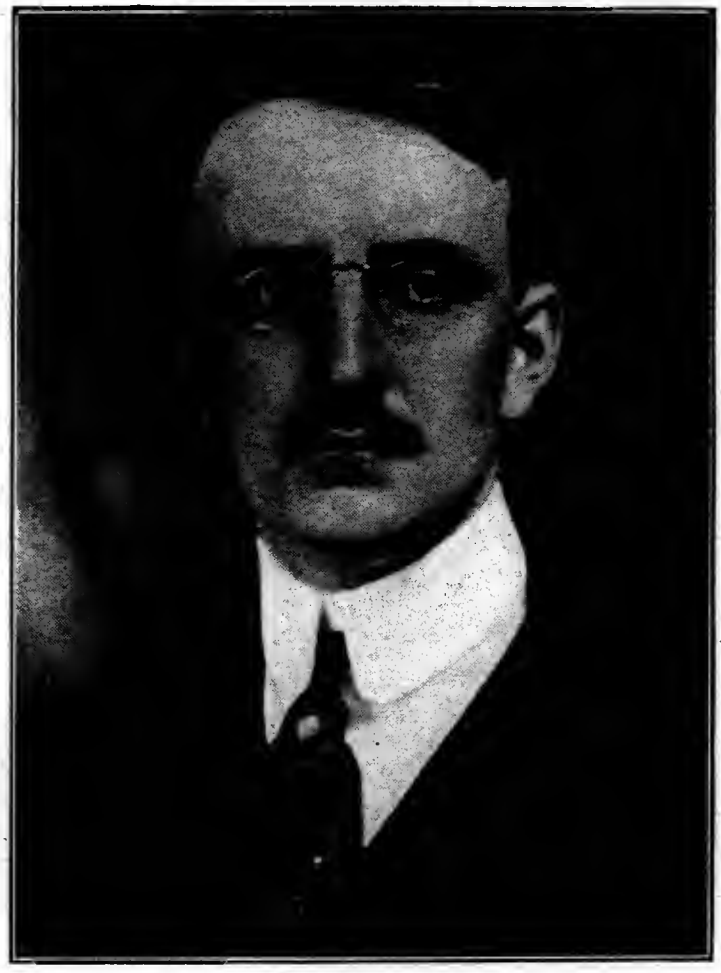
If it is not considered out of place, another quotation may be given:

"The advances of past years in bee-keeping have come chiefly through an exchange of ideas and results through the journals and books on this subject and more recently by the distribution of bulletins from the Federal and State laboratories devoted to bee-keeping.

"It is now coming to be generally accepted that these educational agencies are not entirely sufficient and also that the industry is worthy of more recognition. Several agricultural colleges are now teaching bee-keeping and it is being included to a limited extent in the extension work of various institutions.

"If this work can be enlarged adequately there is a great future for the industry along commercial lines and it is to the interest of every person engaged in any branch of bee-keeping activities to further this development."

Everyone interested in any kind of instruction work in bee-keeping is aware that some bee-keepers disapprove any plan by which more persons may be induced to keep bees. Just as soon as such work is suggested, the ogres Overstocking and Overproduction are called in as allies of the objector.



DR. PHILLIPS.

It is somewhat difficult at times to have patience with such objections but, since they persistently appear, it is desirable to consider them.

It is frequently estimated that nine-tenths of the nectar dries up and is lost, for want of bees to collect it, but this estimate is probably made either from caution or from lack of informa-

tion; it would be much nearer the truth to state that not more than one-twentieth is collected. Even where colonies of bees are abundant, it is usually easy to find places for new out-apiaries, and one who attempts to find a half dozen localities of any size in the United States that are now overstocked with bees will find his task virtually impossible.

Overproduction is an argument more difficult to answer, but it is becoming easier every day. Years ago Moses Quimby, the father of practical bee-keeping, could flood the New York honey market by shipping in less than 30,000 pounds of honey.

Today this causes amusement, for hundreds of towns and small cities are consuming this amount of honey every year.

It must be remembered that commercial bee-keeping is a young industry and the marketing of the crop is only in a formative stage.

But the real answer to the objection of overproduction lies in the fact that it is rare for any honey to be held over until the next season and never in considerable amounts, while usually mid-winter finds the markets short of honey.

This argument therefore need not deter anyone who is interested in advancing bee-keeping.

The real reason back of the objection to the making of more and better bee-keepers is of course selfishness. If a bee-keeper finds that he can make a good living by bees, he may think that he can establish a monopoly on that in his community by keeping others ignorant of the business. This may be possible in a limited community but it is not commendable in general and it is certainly short-sighted and narrow.

It is entirely possible and, in fact, easy to show the fallacies of such objectors, but there is one overwhelming argument against such views which ought forever to silence these critics. Bee-keeping has scarcely yet established itself definitely as an important branch of American agriculture. The present crops are inadequate to make honey a staple market article the year round and the number of commercial bee-keepers is inadequate to supply honey for the easily created demand.

Therefore pride in the industry and a desire to make honey a staple and the demand for it more constant will induce every far-sighted bee-keeper to welcome every legitimate effort to build up the bee-keeping industry.

If it be granted that there must be more professional bee-keepers, from what source shall these be drawn?

There must be recruits every year to the ranks of bee-keepers, but it seems clear that the best material from which to make professional bee-keepers is found among those already keeping bees. The effort is therefore not so much for more but rather for better bee-keepers. The fact is that bee-keeping could become an important branch of agriculture with half the present number of bee-keepers, provided there were more specialists.

Among the agencies for this work, there is one which is the subject of this paper.

Extension work in bee-keeping is not new, for in several states work of this character has been going on for several years.

The special branch of this work which will be discussed is that of the Bureau of Entomology.

The last session of Congress made an increase of $5,000 in the appropriation for the office of bee-culture and, more important, changed the wording of the appropriation to permit demonstrations.

Just as soon as this was made law, a Civil Service examination was called for Agricultural Assistants, which was given on September 20th. Appointments were made as soon as possible and three men are now in the field. No more field men can be appointed under present funds.

In North Carolina, Mr. George H. Rea, former Inspector of Apiaries in Pennsylvania, is working on a co-operative project between the Department of Agriculture, the North Carolina College of Agriculture and Mechanic Arts, and the State Department of Agriculture. His headquarters are in the office of the State Entomologist, Mr. Franklin Sherman, Jr., but most of his work is in the field.

North Carolina offers great opportunity in bee-keeping and the state already ranks high in the number of colonies of bees, but many of the North Carolina bee-keepers have not yet learned the advantages of modern manipulations and equipment.

They have received Mr. Rea graciously and are co-operating most heartily, so that there is hope for great advances in this state.

North Carolina now produces considerable honey but not enough to supply her own demand, so that it is now necessary to ship in considerable honey annually.

The increase in production and the improvement in the quality of the product will, beyond question, increase the demand for honey, so that bee-keepers in other states need have no anxiety about competition from North Carolina for a long time. It is to be expected, in fact, that more honey will be shipped into the state than at present.

In Tennessee, Mr. C. E. Bartholomew, formerly of the Iowa Agricultural College, is working on a co-operative project between the Department of Agriculture, the University of Tennessee, and the State Commissioner of Agriculture. His headquarters are in the office of Prof. G. A. Keffer, Extension Director, University of Tennessee, Knoxville, Tenn. Tennessee is also a great field for bee-keeping and probably has more progressive bee-keepers than most of the southern states, except Texas.

The brood diseases have made a start and much missionary work must be done to induce the bee-keepers to clean up.

In many parts of the state the "gum" is common and perhaps the majority of the bee-keepers are not using the better methods.

But the people of the southern states realize, perhaps better than those in other sections, what extension work may mean to their agriculture and we look forward expectantly to great results here. Mr. Bartholomew has been at work only a short time but the outlook is promising.

The third man on the extension force of the office is Mr. Kennith Hawkins, formerly of Illinois. He is engaged on a co-operative project between the office of Bee-Culture Investigations of the Bureau of Entomology and the office of Extension Work in the South, States Relations Service, of the Department of Agriculture.

Mr. Hawkins will travel throughout the fifteen southern states, assisting the various extension workers in their efforts for the upbuilding of bee-keeping, and will assist individual bee-keepers and organizations of bee-keepers wherever possible.

The fifteen southern states have within their borders over half of all the colonies of bees in the United States.

The last several years show an apparent falling off in numbers of bee-keepers and of colonies, but there can be no question that this portion of the United States has unexcelled opportunities for bee-keeping and, when the modern methods have become common, the south will produce enormous quantities of honey.

Attention should be called to the fact that all extension work of the Bureau of Entomology is in co-operation with the established organization for agricultural extension. This co-operation work is expected of all branches of the Department but, I can assure you, the co-operation was entered upon most willingly by the Bureau of Entomology. There is a vast and efficient organization in the United States, authorized by the Smith-Lever act, for the advancement of agriculture through extension work, the extent and value of which are perhaps not sufficiently appreciated.

In this organization, bee-keeping plays a small part at present, but it is assuredly better for the field men in bee-keeping to take their proper places in this organization than to attempt to go unaided into the enormous problem of helping the bee-keeper.

You will perhaps ask why the extension work in bee-keeping is confined at present to the south.

The opportunity in the southern states has already been made clear. By confining the work to this region there is all the work, and infinitely more than three men can do.

A second reason is the receptiveness of the people of the south to extension work, in which regard they surpass some northern communities.

A third reason is that the south is a virgin field in bee-keeping, offering an opportunity to test the value of extension work in bee-keeping without being misled by the results of other agencies.

When it is considered that only a handful of southern bee-keepers read our journals and our books, this will be clear.

Finally there is a reason worthy of

consideration in the fact that we do not expect any opposition to the work from the southern bee-keepers.

Frankly, it is realized that if this work were begun in some northern communities there might be opposition or open antagonism from some of the selfish bee-keepers mentioned earlier.

With money enough for only three men there seemed no use in going at first into places where the work would encounter needless obstacles.

I sometimes wonder how many commercial bee-keepers realize the narrow escapes that some of our leading bee-keepers have had and how much they owe to some stimulating word from a widely informed bee-keeper. Bee-keeping is, as we all recognize, a business with many pitfalls and at times the best of bee-keepers will be discouraged. This is chiefly because of the isolation of the bee-keeper.

The name, Alexander, is now associated in our minds with a victory over European foul brood, yet, a few years before his treatment was announced. Mr. Alexander went to a New York bee-keepers' convention to say goodbye to his friends. European foul brood had practically destroyed his business and he had definitely planned to quit.

A few minutes' conversation with one of the State Apiary Inspectors changed all this, and we know the far-reaching result of that brief conversation.

In this capacity the official Inspector was an unofficial extension worker, and in passing it may be stated that by far the greatest good from inspection comes from the extension features of this work. Another New York bee-keeper, of international reputation, was saved to bee-keeping by the same man in much the same way.

The brilliant Heddon gave up bee-keeping when he was most valuable to his fellow bee-keepers, a fact which we must always regret.

We cannot know his inner thoughts at this time but it is an interesting speculation whether his attitude toward the industry might not have been changed by the stimulation of an extension man in bee-keeping.

After Professor Cook left Michigan in 1893, Heddon's interest seems to have lagged, and we know that he put great confidence in Professor Cook.

The difference between the voluntary help of a fellow bee-keeper and the assigned task of helping another bee-keeper is not a genuine one.

Every man who goes into such work must carry with him a spirit of helpfulness, of just the kind which actuates every good bee-keeper when opportunity is offered to help his co-worker. A large part of the assistance comes from stimulation to effort, perhaps more than from information imparted.

It would be easy to show that every bee-keeper at some time or other needs just such help as is planned in this extension work. There comes a time in the experience of every bee-keeper when he encounters a serious problem; European foul brood may strike him for the first time and find him unprepared; swarm control may seem an unsurmountable problem; adequate marketing may appear virtually impossible. At present he must get what he can by reading, by correspondence and by expensive personal trips. When extension men are available, he can call on a man to help who knows from wide travel and experience, constant study and careful observation, how these various problems have already been solved.

It would perhaps be considered unnecessary to present these details to a convention of bee-keepers outside the territory covered by the work unless there was shown some way in which each bee-keeper were in some way involved. What this movement needs more than anything else is moral support. It can stand valid criticism, and this will be welcome, but in its infancy it will suffer if there is wild denunciation or ill-advised fault finding.

I hope that every bee-keeper will feel it his duty and take it as a pleasure to support this work.

If you hear or read invalid criticism, show the critic where he is illogical and compel him to prove his assertions.

If such things are published, ask for definite proof or restriction. There should be no attempt to stifle good criticism, however. The extension work does not demand financial support of bee-keepers, their time or their labors; it does demand their good will as does no other effort for the betterment of the industry. For this reason, this subject is presented to you today.

President Miller—Is there any discussion on this subject? If not, we

will hear from Mr. Williams. Mr. Wiliams is at the head of the Honey Producers' League of the United States; he has a paper.

Ladies and Gentlemen: This is pressing me into service a little bit. I had not expected to say anything here, but I have been asked to and I will give you what I have. The subject is:

GEO. W. WILLIAMS.

CO-OPERATIVE ADVERTISING.

I heard a little anecdote the other day. It was not much of an incident as incidents go, but it will serve to illustrate the point I wish to make.

One day a benevolent man was walking in the street with his wife and they met a little one of three or four, crying as if her little heart would break. The kind gentleman paused and raised the little tot in his arms and tried to comfort her. He questioned her as to the cause of her troubles and she sobbed out, "I want to go home." The wife, after soothing her, expressed a belief that she was too small to know her home; when quick as a flash the little girl replied, "I dess I know my home, but I do not know how to det there."

Do you see the comparison? The bee-keepers are mostly quiet, modest people, unused to the tearing, roaring, crowding and bewildering turmoil of modern business. They know very well what they want—they want wider markets and better prices but, like the little girl, there are so many cross streets of competition, so many by-ways of transportation, so many blind alleys of speculation and bewildering combinations of those higher up, that they are at a loss how to get it.

Let us carry the illustration a little further. The little girl had never before seen the cars with their rattle and clangor, and she confided to the good woman, that "I was 'fraid they would fall on Mary." The little mind lacked the experience to know that these same street cars that so frightened her would carry her very near her home if she only understood how to use them. She lacked the broad point of view that knowledge gives.

While the greater number of the bee-keepers are modest and quiet people, going about their business on foot as it were, we have among their ranks types of these different elements that terrified the child, and which alarm some of us, let us hope, unnecessarily. We have the big corporations like huge trains of cars, rushing along at a great speed, carrying vast loads for many people who are unable to carry their own loads, in automobiles, carts, wheelbarrows, or on their shoulders, and we have the little fellows frightened at the traffic rolling around them, and we have some philanthropists to help others find the way.

These different factors, when found in a city, are all vital, and make a complete unit. They coordinate in making a great business machine to carry on the daily business of the great city. The cars are not the enemy of the helpless ones, but are friends when properly understood. They do the things and carry the burdens that would crush the individual man if he were to undertake them.

But the interests of all these elements are closely interwoven. We are all wanting to get to our various homes. We all want better markets and better prices. We may not agree in many details. Some of us little fellows will "kick" when the big trains

try to force their right of way across our garden patch and attempt to grab our markets, and we swear by all that is holy, that we will not buy our supplies off of that train (which some of us do) and still work in friendly co-operation with the train crew in boosting our honey markets.

There is always recourse when a railroad wants our fields for a right of way or when a corporation invades our local market. The courts of law will compel the railroad to pay us the assessed damage, and the court of public opinion will grant to home producers the preference over any honey that even the biggest corporation can bring into our markets.

I know that this is true. I have seen it tried time and time again. The local producer is supreme and unshakable in his home market if he uses due diligence in taking care of it. The large handlers of honey can gather the large crops of the remote producer and distribute it to the spots where the influence of the local man is not supreme, and do it at a profit by advertising it and creating a demand for it. To do this profitably he must buy close, and sell at a considerable advance to cover necessary expense, and also allow his retailers a reasonable profit.

The things make it necessary for him to fix the price high enough so that it gives the local man ample margin to sell his crop. Honey can not be brought long distances, bottled, distributed and sold at a price so low as to affect the sales of the local bee-keeper, and the home grocers will not get "stung" by buying foreign honey more than once, as that one time is all they want.

From a wide experience and observation, it is obvious that the large firms, they do a legitimate business and sell for legitimate prices, are a great help to the little fellows and, in their turn, the little fellows are a help to the big ones. When the local man sells his honey crop at home, it is permanently off the market. Every pound sold to the ultimate consumer is a pound out of the way. It does not have to be reckoned with any more. When 10, 50 or 100 thousand small producers sell their one, two or five tons at home, there is a vast aggregate of honey out of the way for keeps. When the big fellows gather up the remote product in 10, 20 or 100 ton lots, and distribute it to the cities and larger markets, THAT surplus is not left to glut the market and depress the price of everybody's honey.

It is obvious, then, that the interests of the large producer and distributor and the local producer and distributor are mutual. There is no real antagonism, as some might believe, but they are identical. They both have a common desire. They both wish a greater interest in and a better demand for honey. How are we to get it?

We started to talk of co-operation in advertising. This means ALL the bee-keepers and distributors, each in his own way, working to establish the same policy and attain the same end.

It is evident that, if ALL the bee-keepers are to co-operate, they must have the positive assurance that their interests are really identical, in this one thing, even if they are not in some others.

This is the greatest part of the problem. A local bee-keeper could not be hypnotized into spending money that would benefit the A. I. R. line people, or the Muth people, or any other firm more than it would himself, and he would be right in his refusal to do so.

Neither would the A. I. R. people, the Muth people, be inclined to spend money if it would benefit George Williams or any other local bee-keeper more than it would themselves, and they would be right in their position.

The ideal co-operative advertising is that which brings the first, direct and greater benefit to the one who finances it, and which does no harm to others in the same line, but incidentally benefits the business at large. Where all the individuals do this, it advances the interests of the whole body.

To do just this is the policy of the United Honey Producers, when it proposes to have the schools teach "The Food Value of Honey" in the domestic science departments, and the "Economic Value of the Bee" in the graded and high schools.

The idea is to get the coming generation interested in HONEY. Not comb honey, nor extracted honey, not any particular kind or quality of honey, but HONEY.

The older generation was educated

to eat honey at home, before freak food sharps advertised and sold a three cent value for fifteen cents by advertising them in every paper in the universe. But the younger generation have had the merits of this breakfast food, that beverage drink, and the other confection, glaring at them from every page and every bill board until they have forgotten the household traditions of honey.

We have depended on these traditions to sell our honey all the while and neglected to keep pace with these fast steppers in the race for publicity, and we have fallen behind in the race for a market. Not because honey is inferior in value but because of our lack of enterprise is properly keeping it before the public. We have reached a point now where we must advertise widely, or fall farther behind.

The large distributors who sell their honey can afford to advertise generally, but the small producer who sells locally can only afford to advertise locally where his product is distributed. He would be foolish to advertise his honey in places where his honey could not be procured. But, in the business of both the large or the small dealer, it is of the utmost importance to advertise. The small producers, while the aggregate of their business is immense, are not trained to raise and pour out the vast sums necessary to finance the general advertising schemes of modern business, and they would not pay them out for that purpose, even if they could raise them. They are not organized to benefit by such advertising, anyway.

But the public schools—every producer, big or little, has one, two, or a dozen right at his door. He depends on the families of the pupils for HIS market for HIS honey. Any added interest in HONEY means added demands for HIS product. He is on the ground and can encourage the instructors to take an interest in teaching the topics. He can, if he will, give little talks and demonstrations to the classes. He can entertain the pupils and their teachers at his (or her) apiary, and impress them with his personality. He can give a pail full of honey to the class for cooking. In any or all these ways he can make himself recognized as the "HONEY MAN" of his community.

His business will be directly benefited and it will not harm his neighbor, but will really assist him, as it will create a greater demand for honey.

It will benefit the entire business as this kind of advertising is cumulative. Each individual adds a little and altogether create a powerful influence that will be an uplift to the entire vocation.

As public schools are found wherever families are found, it is obvious that awakened interest in honey, emanating from such instruction, means an added demand for ALL honey. The honey of the remote producer as well as the local producer.

In this particular instance, everybody interested in honey can co-operate. Their interests are identical. The local producers, the jobbers, the remote producers are all partners. Each can do his particular part in the way that will bring the largest benefit to himself, harm nobody, and incidentally be a benefit to everybody.

President Miller—Is there any discussion of this paper?

Mr. Miller—Mr. President, right here I would like to say that a year ago I spoke of a bulletin we are planning; we now have the proofs of the bulletin completed. The United Honey Producers up to this time have financed the Bulletin and ready to send it out.

In Iowa, Indiana, Vermont, Colorado, and a half dozen other places the Superintendents of Public Instruction have endorsed them, and have been sending them out in a small way.

We want to send them out in hundreds of thousands. It depends upon the bee-keepers—the more members we have the more we can send out. We have copies (proofs) for any who wish them.

If any one wishes to contribute towards publishing these it will be gladly received.

Mr. Miller—The first question is:

Question—How is the best way to get wax out of combs?

Mr. Baxter (Jr.)—What kind of combs? I think the Hershier press is the best wax press. We got two hundred pounds this year in that manner. I should judge there was less than one per cent in the slum gum. As I skim off the top and pour it into cold water to find out how much has risen there, there is practically none in the last compression. No wax coming to the top out of eight or ten compressions.

President Miller—Mr. Stewart?

Mr. Stewart—Mr. Chairman, I am as lazy as a beggar. You could not give me a press. Out in our country we find the wax close to the top of the water. You take a wash boiler and put a pail or two of water in and throw in your cappings—and we have no trouble at all; the same way with combs of all kinds; you get every particle of wax without all that trouble.

President Miller—Do you all agree with Mr. Stewart that all of the wax comes to the top when you boil it? I am afraid Mr. Stewart is mistaken in regard to that point.

Mr. Stewart—I will take that chunk of wax, chip off that slum gum and you have as nice a chunk of wax as I have ever seen; take that slum gum and put it into the boiler.

President Miller—What do you do with a wagon load melted up in that way?

Mr. Stewart—Most assuredly I would melt it that way; take a couple of wash boilers; I would do that if I had a thousand hives of bees.

President Miller—I have had some experience in buying up slum gum that was melted in that way and melted it over again.

I think the only way that is practical, so far as is known at the present time, to get all of the wax out of the slum gum—that is the combs that have had brood in them—is to press it under water as this gentleman suggests. The Hershier press does that. I am not using that press, but I have found by heating it and skimming the top, as Mr. Stewart does, you do not get nearly all of the wax.

Mr. Stewart—You get every particle of wax.

Mr. Baxter—I do not think there is any faster process and do the work as well as the Hershier.

A member—Everybody agrees that it will get the most wax but I have feared it was too slow.

Mr. Baxter—A person can get one hundred pounds of it out of the worst old comb. A person ought to run about three meltings; it depends upon what method of heating you have; with a steam heating equipment a person works faster, but with a stove as I have I can run off three meltings a day, 25 to 35 pounds each heating.

Mr. Muth—I might as well unfold a method: We have a large barrel, and first we throw all of our old combs into this barrel—we turn in the steam until the comb is very soft; then we put in one of these wax presses; we put it between burlap and keep it from the bottom of the tank, about six inches; put a foundation of boards and a wire screening at the bottom, and wire screening on top of the burlap; then another foundation of boards and fill that up with water and squeeze it; and your wax will come to the top; on the top of the tank we have a wide mouth; the beeswax runs out of the mouth and we catch it in below. We have a hydraulic press, but we find the first way is better. After we get done squeezing the wax you can break it apart and there is no more wax contained in that.

President Miller—Any further discussion?

Question—What is a first class, up-to-date bee-keeper?

Mr. Wheeler—Take a rising vote.

A member—One who practices all he knows how.

Mr. Davis—One who is not too lazy nor too stingy nor too ignorant to do his work.

Mr. Stewart—My definition of a first class, up-to-date bee-keeper: One who can produce gilt edge comb honey in paying quantities.

A member—A word more is needed. That question was asked evidently in good faith because we hear frequently of the up-to-date bee-keeper. We presume that the man who is well posted on everything that is written and on what is said at conventions—knows pretty nearly, at least has a definite idea in his mind, what is the best method for him to adopt in his circumstances, and if he has the determination to use those best methods, he is an up-to-date bee-keeper, but he must first know the modern methods and keep up with the times.

There was a time when I thought I was several degrees ahead but I know now I am several degrees behind.

Mr. Wheeler—I would like to offer an amendment and have it understood an up-to-date bee-keeper gets honey in good shape and then sells it at a good price.

Question—Why is it that the honey market is the same for years

when all the other articles have gone up owing to the high cost of living?

Mr. Bull—I have only found one answer: Most of the bee-keepers have not got nerve enough to ask the price honey is worth.

A lady today had 10 pounds of honey at a cost of $1.40. I was delivering 5 pounds at $1.25. She asked me the reason why. I simply told her the bee-keeper she got honey from did not know what it was worth.

Question—At what price does honey become a luxury?

Mr. Bull—Twenty-five cents a pound; above that it is a luxury.

Mr. Davis—In regard to that question I saw this statement: A comparison was given of the food value of honey comparatively with other articles, and I saw in that that the food value of a pound of honey was about the same as a pound and a half of beef. If other articles run the same, I suppose the answer would be—the way we had to pay for our beef, a pound and a half cost thirty cents. Then, according to that, honey would become a luxury after it was above the price of beef or other articles of equal value.

President—Miller—Butter is not considered a luxury and butter brings fifty cents.

A member—I take the position, honey can never be high enough to become a luxury.

We might ask, at what price potatoes become a luxury; see the price at which potatoes are sold and yet we eat them every day.

The real meaning of that is—honey is not a necessity, sugar will take its place. For my own part I prefer to eat honey on all raw fruits in place of sugar, and have done it for the last two or three years. If everybody did that it would increase the demand.

Mr. Roehrs—If the nutritive value of honey is double that of a pound of butter, and a pound of butter costs fifty cents, honey ought to cost one dollar a pound because I get more value out of that pound of honey. That may be overdrawn, but at the same time we must not forget that honey is not only valuable as a food, but it is just as valuable as a medicine.

Last year we had one of our best known bee-keepers here; he told us he was eating plenty of honey and that it made him well; he said: "The more honey I eat the healthier and better my health is."

Therefore honey is not a luxury, even if it would cost fifty cents a pound in comparison with other food stuffs we are buying at very high prices at present.

We may say we need not eat butter, but we can take a substitute. That is not the question. I think we need honey as a rule for our daily food and medicine, and that it is cheap in comparison with butter.

Mr. Williams—If there is any place on earth that it was supposed people were posted on the food value of honey, it would be a bee-keepers' convention.

The government has bulletins—has some charts giving all these values. You can get them for one dollar—large ones.

Now they give the actual values in calories of honey; a whole list of articles, but that does not tell it. Get a copy of these bulletins giving the food value of honey and it will give you some information. I will give you two or three here:

Honey has 1,475 calories per pound.

Beefsteak has 1,091 calories per pound.

That does not take into consideration protein in the beefsteak which the honey has not.

It is hard to compare one food with another because there are so many factors to consider.

Then oysters are compared with honey:

1,475 calories, honey; 230 calories, oysters. So, if oysters are worth thirty cents, honey would be worth something like $.60—so you see the difference that is in calories.

If bee-keepers do not know these things, how are our children going to know them? and that is the object of getting out this comparative food value of honey.

People will eat things and pay good high prices that do not have the food value of honey, and they think they are nourishing and good for their health; but, if people knew what food value there was in honey, there would be twenty times more honey eaten if you could get it. But you cannot get it.

Those things are valuable and you can get this information by sending

to the Superintendent of Documents, Government Printing Office, Washington, D. C., and sending a dollar.

This will tell you the facts; you do not have to guess at them.

Mr. Stewart—How does honey compare with the food value of sugar? Honey and sugar are identical in calories of heat energy.

Mr. Williams—Honey and sugar are practically identical when you eliminate the water content of honey. There are other things that make honey more valuable than sugar.

Mr. Stewart—What is it?

Mr. Williams—Honey is assimilated in five minutes; sugar, longer; I can feel the effect in the stomach after eating sugar; honey almost instantly digests, the same as water.

Honey contains mineral substances that are needed in the body; sugar contains none of them. We would starve to death if we took sugar as a food. It is interesting for us to study these things.

Mr. Stewart—Does not honey only have eight per cent the nutrition that sugar has, pound and pound?

Mr. Williams—If you take out the water.

Mr. Stewart—But you buy it with the water in?

Mr. Williams—Sugar has to be acted on by the kidneys. Sugar is a dextrose; honey is a nebulose and does not have to be acted on by the kidneys. If one were to quit eating sugar and eat honey instead, there would not be trouble with the kidneys. I know that to be a fact myself.

I have a sister who is a great prohibitionist; they have meat and sugar on the table continuously. I was telling her what Dr. Carton said of the three great poisons; one was meat, the other was sugar, and the other alcohol. I told her that meat never hurt me, nor did alcohol, but sugar acted on me before I knew what was the matter with me.

Mr. Stewart—One thing I have noticed, that the doctors are not falling over each other to recommend honey for medicinal causes.

President Miller—Is it practical to have honey that will suit all tastes; if so, how is it to be distributed?

A member—My experience is that we have honey to suit all tastes. I have not seen any one yet that could not find some kind of honey that would suit his taste. A man's taste will generally demand that which he has been accustomed to. He cultivates his appetite; he may cultivate an appetite for tobacco; he may cultivate an appetite for alcohol; he may cultivate an appetite for limberger cheese, or for anything else; he can cultivate a liking for black honey or white honey, or basswood honey, by using it a considerable length of time until he gets accustomed to it. I have some customers who will have nothing but clover honey; I have some customers who will have nothing but basswood honey; I have some customers who will have nothing but buckwheat.

President Miller—There is one difficulty in selling honey; people are accustomed to certain kinds; a season comes that you cannot get that kind and they will not eat much honey.

The A. I. Root Company I understand is making a blend; they buy up four or five different kinds of honey, and they sell the same kind all the year round and every year. Buy a sufficient proportion of each kind to make sure that their honey will be the same year after year; the one who buys knows what he is going to get.

I put this question to Mr. Root the other day—How can the little fellow blend our honey so as to give the people the same kind of honey the year round? That is a pretty hard question to answer.

His answer to the question was this: The only way was to buy in the market, Chicago for instance, these different kinds of honey and blend them. You don't have to go to California or to Florida, but buy these honeys in the markets and blend them. I do not believe many of us will go to that trouble; it is a problem as to how to get uniform flavor, when we cannot produce it in our own yards.

President Miller—I have five yards and in each of the yards the honey has a different flavor from the other, and next year it will not have the same flavor it has this year.

Question: South Water Street offers eleven cents for the best grade of extracted honey. Siegel, Cooper & Co. are selling A. I. R. Line and Golden Rod, two pounds for fifty cents, in glass containers. Who gets the difference?

Mr. Wheeler—Who, on South Water Street, is offering eleven cents, I would like to know?

Mr. Bull—I wonder how many bee-keepers present know what it costs to put a pound of honey on the consumers' table; go out and work it a while and see. I will say this much before you start, you have got the biggest surprise you ever had in your life or ever will have.

President Miller—It costs money to sell honey; might cost more to sell it than to produce it in some cases.

Mr. Bull—It does in all cases when you come right down to it.

Question—What is the effect of honey dew on honey and how can it be kept out?

Mr. Muth—Honey dew is just a low grade of the sap gathered from the leaves of the tree by the bees and the only thing that it does to the honey is to lower the grade of honey, and I know of no way of keeping the bees from gathering that sap from the leaves of the trees unless you cut down the trees or move out of that section of the country.

A member—Honey dew is primarily an excretion of the plant lice; the only way to keep it out is to get rid of the plant lice.

A member—The American Bee Journal has an article along that line of honey dew; it is the product of plant lice.

There is no question but what that is true. Just how much the bees gather it is difficult for us to determine but we generally know by the taste; it has a very disagreeable taste, in my locality. Look out and not try to winter bees on that. In many cases it is sure death; better get rid of it and feed them on something else.

President Miller—I think the gentleman is correct in stating that honey dew comes both from plant lice and sap. In regard to getting rid of it. One year I had a wagon load of some of the finest looking comb honey dew you ever saw. It looked all right.

What did I do with it? I saved it until next spring and fed it to my bees when they were raising young brood. I have not had any honey dew since—until this year; there was a very little this year. That was seven or eight years ago. Some years honey dew will occur and the next year in the same yard you will not get any.

I might tell you a little story: A gentleman came to my place to buy some comb honey this summer; he was from Virginia.

Telling what fine honey they had in Virginia, he was sorry he could not get so good here. We asked him what kind of honey it was and he said it was leaf honey. We fitted him out with leaf honey and he went away happy.

Our honey dew came in June; that was used up in brood rearing before the fall flow.

Mr. Stewart—I had 140 colonies in the fall and had fourteen in the spring feeding with honey dew.

President Miller—I believe this is the end of the questions. Any one else any questions to ask before we adjourn? There was a question asked at a convention the other day: We might have it stated and give you a chance to think about it.

Question—What is a drone comb worth?

What is the value of comb drawn out from foundation including frame and wax without any honey with the bees on?

There are two or three ways of figuring that out; we might bring that up tonight if we do not forget it; then follow that up—how much is it worth, filled? How much are ten of them worth? How much is a hive of bees worth with forty pounds of honey?

What should it sell for now, and what in the spring?

We read of a hive of bees being sold as low as $4.00, and then as much as $12.

Mr. Stewart—It depends upon whether you are buying or selling.

President Miller—Now we have a good session for this evening—a paper by Mr. Bruner, and have a Question Box and two or three other papers, and we will be glad to see every one present.

If there is nothing more before the meeting at this session we will entertain a motion to adjourn—the time as given on the program is 7:30 o'clock.

The convention will stand adjourned until 7:30 this evening.

EVENING SESSION.

Convention convened at 7:30 p. m.

President Miller—We have "Marketing Honey," by N. E. France. Mr. France has sent a letter with a few statements and remarks—some good points, written briefly.

Marketing Honey.

First of all we must produce No. 1 goods and sell in attractive packages. Unfinished sections. Unfinished or uncapped extracting combs should not be considered marketable goods. Chicago's best honey dealer for years has claimed this the great cause of low price for honey.

(2) Bee-keepers have not educated the public in the food value of honey. When consumers consider honey one of the cheap, condemned foods and not a luxury it will be more in demand.

(3) Every bee-keeper should have some standard brand, such as he can every year provide his customers and see they get it. I cannot produce a blend like wholesale dealers, so furnish clear clover and clear basswood honey. My customers are reminded at close of honey season what I have, and soon I am sold out. This kind of consumer market takes from 35,000 to 50,000 pounds per year and list of consumers is growing rapidly.

Home Market.

(4) Each of my out apiaries is on farm with telephone at the farm house, and the day I am to extract honey at that apiary I call up the farmer's wife, notify her of same. She at once gives the neighbors notice, and, as they come from milk factory, bring along a milk can for winter supply of honey.

I have several times seen teams waiting their turn for honey, same as unloading milk at factory, and 1,800 pounds sale single day this way, and no cans to furnish, but cash in hand the same day the honey is extracted.

Home Store Market.

(5) I supply merchants honey in glass containers. Charge them selling price to consumer. What I trade out is where they make profit, or, if I draw cash, deduct 10 per cent.

This label is all I use on containers.

I never had enough honey to supply my market (own production 23,000 pounds to 54,000 pounds) and have to buy when I can get goods like my own.

Eighty per cent of my honey is sold in five gallon cans to consumer direct.

Educate the consumer and produce quality goods. That is all.

N. E. FRANCE.

President Miller—Are there any remarks in the discussion of this?

Mr. Stewart—It is all practical and right to the point.

President Miller—Mr. France's mode of selling would not probably suit all of us. We would not all want to sell in milk cans. We would not all want to trade it out to stores. This process is probably best for him; it would not do in all cases; it might not be best for us.

Mr. France sells 25,000 to 35,000 pounds in 60 pound cans. Is this the best way to sell it? Undoubtedly he has to sell it for a low price if he sells it in 60 pound cans. Has anybody a better way?

A member—He ought to get a pretty good price direct to the consumer.

Mr. Stewart—What do you consider a low price?

President Miller—I have heard white clover honey sold at 6½ cents this year.

Mr. Hassinger—I understand Mr. France gets nine cents direct to the consumer.

President Miller—Is that drawn from the extractor, candied honey, or is it liquefied and clarified?

A member—Is it warmed after extracting before he puts it in the cans?

Mr. Hassinger—He warms it while it is yet fresh from the bees. He warms it up right away next day after he extracts it.

President Miller—I don't want it understood I am criticising Mr. France's method; he has the very best methods for his locality; perhaps some of us have better in regard to our locality.

A member—I might explain: He warms it up before he ships any of it, no matter how fresh it is; he does not let it go to market until it has been warmed up to a temperature of 140 or 150 degrees, and lets its cool down again. He says that helps to prevent granulating and it keeps a longer time. He settles it and then strains it in addition.

Mr. Wilcox—This is touching one of the points that I have considered very vital. In marketing our own honey,

most of us can sell more than we do. I think I see the tendency among bee-keepers to do that more they used to. The Home Market for the local bee-keepers seems to me like the very best of market we can get. We can get a little better price, and right at home, and when we all get to doing that it will relieve the market wonderfully. Mr. France's way of selling would not suit me at all. We raise comb honey and what little I raise I always sell before October. I am in no hurry but it just goes.

I was amused one time—we had a neighbor who had bees in box hives; had five of them; he came down to my place one time and said, "Williams, can't you fit me out with some patent comb?" I said, "Maybe;" I let him have five hives. It was a good year—he made some honey, and came and got a second set of cases; he got a little honey; he came to see me one day and I was not at home. My wife said to him: "Maybe I can help you out. What is the matter?" "Well," he said, "I have so much honey I came to consult Mr. Williams about it. I have got 125 pounds of good white honey. If I should throw that all on the market at one time it would break the market down." And she took him out to the shop. I happened to have about 3,000 pounds, and she showed him that, and he threw up his hands. "I did not know there was that much honey in the world. I guess my 125 pounds won't make much difference." He asked me how to sell it. I said to him: "Mr. M———, get a little board about that long and put "HONEY FOR SALE" on it, and if you do not sell your honey inside of two weeks I will take it off your hands. He came to my house in about ten days and wanted another case of honey. He said, "That is all gone and my neighbors want more. I guess I won't break the market."

He did not have any idea his home market would consume 125 pounds. The Home Market, in my opinion, should be cultivated. When everybody gets to doing it there will not be complaint of low prices.

President Miller—I find the chief difficulty in selling a 60 pound can—the person gets tired of it; the next year when I try to sell that same person 60 pounds, he says, "I have got some I bought of you last year." If I sell him a ten pound pail he will come back for more. In dipping into a 60 pound pail they are apt to get tired of it before they finish it.

President Miller—Mr. Bruner has a paper on the "Selling Prices of Honey."

Selling Prices of Honey.

(E. H. Bruner, Chicago, Ill.)

Friends, I have no paper and I do not know much about selling honey. The question of price has a whole lot to do for a great many of us with this sale of honey. The two numbers, Marketing of Honey and Selling Prices, were put together closely on the program.

The question of price usually comes up when we have honey to sell but that should be merely incidental; that is the last thing one thinks of when he has good goods to sell; first, he gets people to want the goods.

The price on honey should be always thought of as one of three different things:

If we are going to ship our honey to the market, or sell it in a lot to some one—send it to a commission house—that would be a wholesale transaction. That price of necessity must be different than if we were selling it to retailers, and, if we sell it direct to the consumer, the price must be still different than if selling it to retailers.

If we are fair to ourselves—to our customers—you cannot sell honey retail at wholesale prices and be fair to yourself; you cannot sell it to the retailer at wholesale prices and be fair to yourself. We forget that sometimes. We have a crop of honey and want to unload it. We want to get our money out of it and we let the other fellow do the worrying about it. That is not business. The wholesale or commission man would pay us certain figure for honey depending on conditions, but he has to find a place to put it; he has got to sell it to the wholesale grocer or bottling house or some one else. He has got to be paid for his trouble and time, clerk hire, rent, and his charges are not unreasonable.

The man who buys honey and puts it in storage before he unloads it is entitled to a return on his investment.

There is a difference between the price to the wholesaler, and the commission man must sell it to the retailer so that the price must be different; but if we see in bee papers that the price of honey is, for extracted, eight,

nine, and ten cents a pound, do not for goodness sake get the idea that we will sell honey a pound at a time, or three or five, or even 60 pounds at a time for that price.

There has been big improvement in these things the last few years, but some of us have not learned all yet.

The price to the consumer must be different than that to the retailer—but, when Mr. France sells to the retailer at the same price he will sell to the consumer, he certainly is doing all he can to discourage that retailer handling his honey, and yet that retailer could perhaps sell a lot of honey if he had fair protection.

There are three prices: to the wholesaler, the retailer, and the consumer, which we have to consider.

If we do not make it interesting to the dealer, by giving him a margin of profit, we are cutting off the possible channel for the marketing of honey. We will have nobody but the consumer to sell to eventually, and that is just what is happening. We are doing all we can to cut our own throats in selling honey to the consumer at so low a price that there is no margin left for the dealer. We are discouraging the natural means of putting honey into the hands of the consumer when we do that.

Up to two years ago there were not one-half the grocers that handled honey at all; and during six months of the year twenty-five per cent of them will not sell you honey because they have not got it.

You educate people in the use of a product and then cut off their supply for six months of the year, what advance will you make?

In Europe they are using four or five times as much honey per head as we are and about a third as much sugar, and they are paying more for honey than we dare ask here.

What makes the market price on honey? I wish I knew. I do not. This year we got, at wholesale, a certain price for honey. Why did we not get twice that, or more than half that?

What established the market price on honey? If we ship something to the commission man, he sells it for what he can get for it, and he knows a whole lot about the market price, but we do not know anything about it, and it is mighty good for us that we have honest people handling our honey.

With eggs selling for 25 per cent more than they did a year ago; sugar selling for twice what it did nearly two years ago; nearly every food product increased from 25 to 200 per cent, is it not possible to boost the price of honey at least one per cent?

Are we having more honey?

Should there not be some understanding among bee-keepers that we would have something to say about the price of honey?

Some sort of an organization? Some means of communication—some way of considering this matter?

If you bring your honey to the depot and say that you want to send this honey to so and so in Chicago; and you say to the depot man, I will pay you one-fourth cent per pound for taking this honey in there—you will find the price is set for hauling—the commission man has his price—the cartage man his price, and you have nothing to say about it.

Do you set the price you will sell your honey at?

You take what is offered you. Is that business? Is there a business manufacturer or any other kind you can think of that sells his goods the way you do with your honey?

You say to the Harvester Company: "I will give you ninety dollars for a binder." You will not get it for that unless that is the price they have set on it. They know what the goods cost. Do we know what our goods cost?

Can we tell what it costs us to produce one pound of honey this year?

It is said that ninety per cent of the business firms of the United States today do not know whether they are making money or not. I believe it is true. I imagine that that is true of the honey business the same as any other business. But what does make the market price on honey?

Last year we sold our honey at so much. This year we paid twenty-five per cent or more for sections, for tin cans, maybe fifty per cent more unless we are fortunate.

Our time is worth more because it costs us more to buy the things we have to live on. But are we getting any more for our product that last year?

Who makes the market on honey?

Whose fault is it we are not getting more?

It is our own fault because we are not trying to.

Some of us are making a fair price for our product. Some of us are not getting a price we should.

The price to the retailer will be governed largely by competition.

It is a question of Supply and Demand of course in most lines.

That is a matter one has to settle by trying out trade, but even there it is not competition alone; it is a question, as Mr. France says, of getting a little better than the other man has —putting your brand on it—and doing a little pushing—ASKING the PRICE.

Ask a fair price for your effort—for your time—for your labor and other expenses.

Competition will prevent your asking too much, but you do not have to sell at the price the other fellow sells at, and that has been pretty clearly demonstrated by an advertising campaign that has been put on by one of the Supply Houses.

They started to get more money for honey than they thought honey could be retailed at.

Now as to the question of price: I would not ask any o^e you to tell me a thing you did not want to tell—but here I would suggest,—I have some slips of paper, and, if you are interested and care to do it, I would like to know what the average price we are selling our honey at. How much we sold the last three months and the price per pound at wholesale. The same where we sold to retailers—the same where we sold to the consumer.

If you do not want to put down the price or quantity, all right. I think if we would do that, and be a little honest with each other, we would be surprised at the figure we will get.

Mr. Wheeler—I would like to hear Mr. Burnett answer that one question: What sets the price of honey? Some time this evening I would like to hear that.

Mr. Bruner—In connection with this —we have sold honey out in a wholesale way. The price to the retailer would be the price where we bottled goods and sold to the retailer, who must sell to the consumer in smaller packages.

The price we get where we sell the whole crop in one lot is distinct from the price at which we sell to the retailer or direct to the consumer. Those three prices ought to be emphasized as they are not being emphasized, by bee papers.

When we publish in the bee papers the wholesale price, we are advertising to 100,000 bee-keepers all over the United States a price that is not the price they ought to know. The papers ought to print the price at which honey is being actually sold to the consumer, in connection with those other prices. It is misleading if you do not put it that way.

I saw a forceful article in a western paper—conditions might be different here.

When the crop is ready, there is always some fellow who has got to have some money. The wholesalers have got their agents out and they get in touch with him; they spot a man here or there who is hard up; he has got to have some money; he gets his crop extracted early because he wants the money; a buyer comes along and offers him a price that is ridiculous; the next day another buyer comes along and offers him a lower price; about the time the third buyer comes he begins to think that is the market. If it is neces to send four or five buyers, they come and, eventually, his honey is sold at a ridiculously low figure.

That price is advertised and that price establishes the market. I do not believe that is true of Chicago, but those things are being reported as true in other territory.

We have not had anything to say about the price we get for our product, and I protest.

A member—All agricultural products are sold at a price made by the buyer; the buyer fixes those prices.

Mr. Bruner—That is true; the farmer is protected, and so is almost every other product than honey, by the Board of Trade that has the handling of that particular product; eggs, chickens, wheat, the prices rise and fall by the Board of Trade.

A member—I don't know whether we are any worse off than going through the Board of Trade and being gambled on, like wheat, pork, and so on.

Mr. Wheeler—One thing about the price of honey:

A man in the country, picking up eggs and butter, cheese and farm

products, gets some honey, and he ships it into a commission house who does not make it their business to handle honey; that honey goes in with other goods.

Where is your honey? I saw some honey down town that a fellow had just got in and he let me have it cheap; I took the whole crate of it; he bought it at 5 cents below the market.

Now, there are lots of those kinds of sales being made. Some of my best customers pick up honey in that way; buy it clear below anything they have been buying honey for. They take a chance on it; that sets the price for honey in that man's store, unless he hears his neighbors is charging a big price, then he will make more profit.

Mr. Bruner—That is comb honey you are speaking of. That is the meanest thing in that respect that comes on the market.

A member—I might state in this connection one of the reasons why I have not sent comb honey very much to commission men; if you follow the market you will see there is a great deal of honey that looks as though it was wet. It spoils quickly in such atmosphere as we have today; if they don't sell it soon after they get it, it must be sold low.

President Miller—They put it in the ice box and sell it.

While we are taking this up, Mr. Wheeler, I believe, had a question a little while ago—will you repeat it?

Mr. Wheeler—I wanted Mr. Burnett to answer the question—what he thinks sets the price of comb honey in the market in Chicago this fall?

Mr. Burnett—That is just a result of conditions.

President Miller—While we are waiting for these papers, we have a few minutes for the further discussion of the selling question.

Has any one here anything to say regarding this selling proposition?

Dr. Phillips—I do not sell honey myself. I would like to give a little experience of one of the members of my family in selling honey, which carries out what Mr. Williams says about the home market.

The location is one of the through automobile roads in the country. We had a sign put up on one end of the lot which caught the automobiles going one way only, and we put a sign also on the other end of the lot.

There was only a small crop from a few colonies which amounted to six or seven hundred pounds. The honey was off color and what we would consider poor quality. It was sold at twenty cents a pound, plus the price of the container; thirty-five cents a pint; sixty-five cents a quart.

Two thousand five hundred pounds were sold and, before the year is over, I anticipate it will be over two tons, possibly three.

Last winter the trade kept up all winter; not anything like as big.

It seems that this offers an opportunity for getting rid of some honey without almost any effort, at a pretty good price, and relieving the wholesale market to that extent. There were only three people who went away on account of the high price of the honey.

President Miller—I want to say that Mr. Rundle, who has several hundred colonies a little east of Cairo, tells me he sells practically his whole crop to tourists coming through in automobiles; he sells most of his honey that way right at his door. He has enormous signs, some of them a mile or two away, directing them to his apiary. He has his hives in sight of the road; he sells his honey at a good price.

Has any one else any suggestions?

Mr. Bruner—I would like to tell of an experience I had in buying honey of a certain party. I had been buying his extracted honey; this year he produced 2,000 pounds of comb honey. He thought he could sell it all at home but it did not move as readily as he thought it should. The farmers had been coming and getting it at eleven cents the section.

I asked him what he would sell me the whole lot for; he had left a couple thousand pounds. He thought eleven cents was right; I told him to send it along. He must have spent two days packing that honey; he certainly had it packed. One of the finest packed shipments I ever saw, but the idea of his selling a section at a time for eleven cents, and yet he wanted eleven cents for a ton of it and it took him two days getting that ton ready for the market and another half day hauling it to the depot.

President Miller—There are some people in our town who advertised in the papers a long time—comb honey, fifteen cents, delivered on the place. I tried to buy all he had and he would not take less than fifteen cents a pound for it; he was a farmer bee-keeper.

Mr. Bruner—Mr. France said he had a market for from twenty-five to thirty-five thousand pounds of honey a year.

I presume that is true. By the time I have been in business as long as he has, I would hope to have that much of a market, and I think I would want about two and one-half the price he gets.

I run an "ad" as an experiment, quoting honey at $1.25 for five pounds, between two "ads", one quoting ten pounds for $1.20 and the other $1.35, and it paid me.

Mr. Wheeler—Paid you in sales, you mean?

Mr. Bruner—Yes, the price does not sell honey necessarily.

Lots of people will buy when the price is high that would not buy when the price is low.

Mr. Bruner—Have confidence in your goods and you will inspire confidence in somebody else.

A member—There is a great deal said about price. The point is how to sell poor honey. One year I was delivering to a man in Milwaukee. I sold out all the honey I considered good marketable honey; he wrote for more. I sent him two barrels and told him he might sell that for what he could get; that I would be satisfied to take what he got. He sold the honey and remitted me $——— more than for the best honey I had; this honey was sour. I bought up more sour honey when he wanted more and sold it to him.

Mr. Bruner—There is a gentleman who is a business man; he had a trade established and he took care of it.

Mr. Stewart—Will that kind of business hold out? That kind of business will not hold in this country.

A member—I did not tell him it was good honey. This fall one of my neighbors came to me to buy honey, where there was plenty of it to select from. He selected a ten pound pail and asked the price. I said, "six cents," and he said, "What makes honey so high?" I told him to taste it and see if he liked it; he liked it; it was honey dew that had been candied and boiled, both.

President Miller—Has any one a suggestion as to how to dispose of poor honey—dark honey?

A member—Sell it to bakers.

Mr. Bruner—Most of the bakers I know want the best honey I have. When you are making mild flavored cakes you want good honey.

A member—Honey is not poor because it is dark.

President Miller—That is true but a great many people who do not know consider dark honey poor honey.

President Miller—We will now hear the result of this vote.

Mr. Bull—This is wholesale price, sold in lump:

Extracted honey—

Average	9½ cts.
Highest price	11 cts.
Lowest price	8 cts.

Comb honey—wholesale—

Sold at an average of.....16 cts.

To retailers, extracted was sold at an average of 14¼ cents.

The highest being 15 cents, and the lowest 13.

Comb honey was sold at average of 16⅔ cents.

The only difference between wholesale and retail, two-thirds of a cent per pound on comb honey.

To users—

Average price, extracted honey, 19 cents; highest, 25 cents; lowest, 10 cents.

Somebody is losing a lot of money.

A member—There may be a difference on account of the container.

Mr. Bull—There cannot be a great difference.

Comb honey to the user, average of 20½ cents.

Highest, 25 cents; lowest, 12½ cents.

I think it is time some of us woke up and that a lesson was taken from some of those figures.

Mr. Baxter—I sell to the consumer as low as ten cents where they take fifty pounds. As high as twenty-five cents where I deliver in small bottles.

Mr. Bull—Even at that I notice these wholesale figures average nine and one-half cents.

I sold a can to a neighbor and got a little over twelve cents, and that is cheap; I should have charged him fifteen cents.

President Miller—Any further discussion of this?

Mr. Anguish from Canada has a word.

Mr. Anguish—Mr. Chairman and Bee-Keepers: I listened to this over at Lansing. It is one of our most vital points in bee-keeping—getting rid of our honey.

I will give you a little idea how we run it over there.

I won't say we are ahead of you. We are in price—the way we have been going this three or four years—in our Association at the Ontario Bee-Keepers, I am speaking of now.

All of our local associations are affiliated with that association. They send out a list to all of us. We have a committee formed from our association—The Sales Committee from the Ontario Bee-Keepers' Association—of three members, with the Secretary added, that makes four, and they send out a circular every fall or every summer, about the time our honey season is winding up—that is our light honey season—before it is off, and we send in an estimate of what we have got; the number of colonies we had in the spring, the number of pounds of old honey on hand, if we have any, and the number of pounds of honey we are looking for—and they figure up the situation, taking into consideration all kinds of fruits—they figure that in with the honey—and form an estimate of the price, and then they set the price.

The first year the wholesalers did not pay much attention to it, but now we can't sell to the wholesaler until after these prices come out. We find this works out fine.

Some get a little weak in the knees when they see these reports—such lots of honey, and they sell below—but those that hold out get their price every time; that is the way we run it in Ontario.

Mr. Bruner—What price are you getting this year for extracted, clover?

Mr. Anguish—I should not tell or you will want to come over there and keep bees; so far as keeping bees it is all right, but the citizenship!

Mr. Bruner—Yes, I know we are undesirable.

Mr. Anguish—The committee struck our price this year at 11½ cents, extracted, wholesale.

Mr. Bruner—Do they make any recommendations as to the price to retailers?

Mr. Anguish—No, that is where I have been at them. The retailer then thinks he is a wholesaler because he is wholesaling a few pounds—that is the only thing that is wrong in it. I have always contended the wholesaler is the man you sell the whole crop to.

Mr. Anguish—The best thing about this is that it comes out in every paper; all our papers will have it; one paper copies it from the other. And that does not hurt you any because every time you speak of honey you are advertising it.

Mr. Stewart—Are you not forming a trust on honey when you meet together and set a price?

Mr. Anguish—We do meet together, but are we overdoing it?

Mr. Bruner—The government is not objecting to trusts among farmers on this side; it is only some of the rest of us in some other kind of business than farmers. The price is fixed on Elgin creamery butter every week.

President Miller—We have with us Mr. Kindig, Newspaper Inspector from the state of Michigan, we would like to hear from him. Mr. Kindig, we would like to have a few words from you.

Mr. Kindig—Ladies and Gentlemen: I am sure this is an unexpected pleasure. I hardly expected, with my small experience, that it would be of any value to gentlemen who have been in the game all their lives, but, when Mr. Bruner was talking about that advertisement which appeared in the paper between two small advertisements, I could not help but feel it was the price that sold it. The general public knows mighty little about honey.

You can take two pails of honey; (I never tried this, but I believe it is true); and go to the ordinary buyer of honey and ask him fifteen cents for one and eighteen cents for the other, and he will buy that for eighteen cents.

I say that because of my experience in selling to the consuming trade—that it is not so much a question of what they pay for it; (that is a secondary matter if they want honey); but they want the best they can get. Not many of them are going to quibble about the price. Nineteen or twenty

cents is a matter of very little difference.

Some of them have relations back over the hills from whom they can get honey for ten cents, and, when you want twenty or twenty-five cents, you run up against something, but that is a very small part of our consuming public. I am speaking about the Elkhart situation.

It is only a small part of the consuming public in Elkhart that knows that extracted honey can be bought for less than nineteen cents a pound, the price I get.

This matter of price is not a serious consideration for they have got the money.

We find that our best customers are among the laboring people, and when times are hard they say honey is a luxury.

I believe that any one selling honey who tries to make a low price an object in the sale of honey to the consuming trade is making a very serious mistake.

I started a young fellow out with the first honey I ever sold in Elkhart —put up in little glasses that hold ¾ of a pound—for fifteen cents a glass; he went around this place and that, with rather indifferent results for several days, until he got tired of that job and quit.

Later on I got hold of another young fellow who had been selling honey, seventy-five cents for five pound pails, and he thought that seventy-five cents was the limit that could be asked. So, after we argued the matter over—I wanted to ask one dollar and he wanted to ask seventy-five cents—we compromised on ninety-five cents the pail.

I have been much gratified to find he has changed his price from seventy-five cents to $1.00, and now he tells me he is going to get $1.25.

I believe the matter of asking a small price for a good product does not help the sale of it particularly.

When you establish yourself as a reputable dealer or producer, one who can furnish a first class article every time, the people will quit thinking about the price.

I believe we overestimate this proposition of trying to put the price low for the sake of selling the crop.

My wife and I bought some furniture today, and here is just a little experience that confirms my view along this honey line:

There were two tables there—library tables—one of them was $27.00 and one was $23.00; we looked them both over and asked each other which we liked the best, and we finally decided that we would buy the $27.00 table.

We are not any different than the rest of the people we are selling to. That same principle generally applies.

There are a lot of bee-keepers who are falling down by putting honey on the market in such a condition that within a short time it will granulate in the pail—and maybe there are directions on the pail that, if you put it in hot water, 150 degrees, etc.,—it will make the honey all right, but usually they do not read that. They call you up and say the honey is spoiling; you call their attention to what it says to do in case of granulation, and they never have read that.

The best insurance against kicks, and the best assurance that honey is all right clear to the bottom of the bucket, is to heat it before you sell it so that it will stand up until they eat it.

President Miller—Mr. Stewart has a paper I am sure we will be pleased to hear. (Things That Don't Pay.)

Mr. Stewart—Bee-keepers are always telling the things that pay them. These are some of the things that don't pay me:

The first is—It does not pay me to have somebody else make my hives.

It does not pay me to paint my hives.

It does not pay me to buy queens.

It does not pay me to buy swarms on full sheets of foundation.

It does not pay me to winter bees in a one story brood chamber.

It does not pay me not to feed between fruit bloom and white clover.

President Miller—Here are several interesting points, who is ready to discuss them?

Mr. Wilcox—With me, I hardly agree with him on some of those points. I would not think I could have the best possible success if I did not feed two weeks before clover. I want to commence a month before. I learned many years ago that there was no honey flow the last week in May and the first week in June, and the bees will kill off their drones and, necessarily, the queen stopped laying, and

it is necessary in our locality to feed, and it would not pay to neglect it.

President Miller—I believe the gentlemen are right on that point, provided the hive is short of stores. If they have plenty of stores I do not think they will stop breeding between fruit bloom and clover.

Mr. Bull—I think that was brought out in the Michigan convention pretty strongly. What do you feed? You probably mean sugar syrup.

Mr. Wilcox—I feed honey. I keep honey enough for that purpose, and I keep it in comb so that there is nothing to do but to hang it in the hive.

Mr. Stewart—Do you feed out of doors or in doors?

Mr. Wilcox—Feed it in hives.

Mr. Bull—Do you uncap that honey?

Mr. Wilcox—No, put it close enough to them so they can warm it.

Mr. Bull—In feeding in the fall and not in the spring of the year, I believe as Mr. Doolittle said: Give the colony enough honey in the fall to last them until clover, and then give them ten pounds more in the fall and it will be just right. If you have a fall flow and you take that honey away from those bees, there is not one colony in one thousand that will have enough honey. That brood chamber will be filled with brood.

Leave that super of honey on for three weeks after the honey flow and you will then see there will be no honey there but will be in the brood chamber where it belongs.

Mr. Stewart—After fruit bloom your hive is chock full of bees and brood; there is very little honey in that brood chamber and there are two or three weeks that those young bees have got to be fed; honey is not there.

Mr. Bull—Instead of putting honey in, you have that hive full of honey in the fall; they are not going to eat it up during the winter. What are they going to do with that honey? Put on super before fruit bloom; if they need the room they will put that honey in the super; they will use it when they want it.

President Miller—I make a practice of saving a number of brood combs full of honey; save about one comb in every hive. I use what I need in the fall. If I find empty hives I take them out and put in a full one; it is the easlest way and I think it is the best way. Slip out an empty comb and put in a full one; it will not be necessary to do very much outside feeding.

Mr. Stewart—I prefer outside feeding.

Mr. Wilcox—On another point in that paper of Mr. Stewart:

He says it does not pay him to buy queens.

Queen rearing is a branch of bee-keeping itself. I have kept bees for forty or fifty years and I cannot rear queens yet; I prefer now to buy my queens.

With the making of hives: I have always made my own because I can, but there are a great many others who are carpenters who have material and machinery, who can make their own, and there are a great many who cannot and they better buy them.

Mr. Stewart—Mr. Wilcox, I claim that any man who has ten hives of bees, one in that ten is as good to gather honey as any he can buy. You can get enough out of that one hive as good as you can buy, and can raise your queens from that.

Mr. Bull—That is not the point we are talking about—whether it is best to rear queens. When you want queens is during the honey flow in June. The honey producer who is trying to produce honey has no time to fool rearing queens. It will cost you three times as much to rear them as to buy.

Mr. Stewart—The cheapest thing I have on the place is rearing queens.

President Miller—I find I can raise better queens than I can buy; I do not know about being cheaper.

Mr. Wilcox—I cannot raise them as early as I want them in the spring.

President Miller—There is an advantage in having early queens—there is a disadvantage in having poor queens.

A great many queen breeders are not careful in the selection of their stock. If you get hold of first class stock, you better raise some queens, anyway.

Mr. Bull—I have bought queens a good many years now. A year ago last summer were really the first good queens I ever bought. I had twenty of those queens this last spring, and I could pick out each and every one of those queens by examining my

brood without looking at my records. I could also pick out those same colonies when I got ready to take off supers.

Mr. Anguish—Of course we can raise exceptions to several of these little "Don't pay me to"—

It did not pay me to use starters—but it may be different here.

I have got queens from this side and they were no better when they got across the line. If I want lots of drones, and it takes as much honey to raise one drone as two workers with me, I would use starters, and that is where I think I may fall down, and maybe it would pay to raise those big fat drones instead of workers.

I am using full sheets of foundation.

Mr. Stewart—I want a double handful of good husky drones in every hive I have got, from May until September.

Give me no crowded brood nest and that hive of bees will work. There will be no loafing there; that is the point—no loafing.

Mr. Wheeler—I use the Heddin hive; put starters in the upper and lower stories.

Mr. Stewart—You take Hutchinson's Success in Bee-Keeping, it will tell you how to do that.

President Miller—I can see the advantage in raising your own drones. There was a time when I let my neighbor raise my drones, and I wondered why I had so many black bees.

You can see where I got the black bees—Italians in a little while would be black.

Mr. Stewart—Don't you like your black ones?

President Miller—Not so well as the others; they do not like me so well, either.

A member—I have an observation hive; I think it was bought foolishly, but I wanted to see them work and there are more drones than workers in that hive. Let some one tell me why.

President Miller—Because you had drone comb instead of worker comb in your hive; probably you did not use full sheets of foundation.

A member—Yes, I did.

Mr. Wheeler—Have you drones now?

A member—Yes.

President Miller—See if you can find the queen. Sometimes the queen will lay drone eggs.

A member—I had hoped that the winter would solve that—that they would either take a new queen or something.

Mr. Anguish—Mr. Chairman, I think the winter will solve that problem.

President Miller—Is there anything further before we take up the Question Box?

Question—Are bee diseases an advantage to the bee-keepers, and why?

President Miller—Is foul brood a good thing?

Mr. Wilcox—That question is sarcasm.

Mr. Anguish—I think I will answer that question. Yes, it is a good thing; it puts the bee-keepers on the alert and makes them careful. I think I look after my bees a little better than before it was in the country.

President Miller—It puts the careless fellow out of business.

Mr. Anguish—And it puts his neighbor out, too. The careless fellow wants to be looked after if you know where there is one; he is apt to put a lot of you out of business.

A great many have the idea that because a young man is just starting up he should not have encouragement. We have them over in our country. Some of our great big fellows do not want to see any one start up; still they like to stand amongst a group of students and boost themselves, but I would say, help him all you can.

President Miller—I am glad to help any one who will help himself.

Mr. Stewart—It is a benefit to me—foul brood. Twenty or twenty-five years ago we did not know much about American foul brood. It struck my neighborhood, and within two miles of me there were within two and three hundred hives of bees. I kept still and sawed wood. There are not a dozen hives of bees within two miles of me now.

Question—What is the cost of Langstroth comb and frame built on a wire frame and full sheets of brood foundation? This includes wood and foundation and comb after it is drawn out.

Mr. Stewart—It depends upon what you want to use it for.

President Miller—Use it in the brood chamber—supposed to be a perfect or

nearly perfect comb. Any one an estimate on its value? The value of a colony of bees on such a comb? What is one comb worth?

A member—I should guess fifteen cents. One and one-half cents for the frame; seven and one-half cents for foundation, and one cent for making up frame, putting wire in; that makes ten cents and allows nothing for the work of the bees and drawing it out.

President Miller—The bees use up the honey in making that comb.

Mr. Wheeler—I would say twenty cents; I sort of lumped it; ten cents, foundation; I should say ten cents more for honey and work of bees. I think there is as much wax after the foundation is drawn as there was foundation. In addition to the frame that would be another cent.

President Miller—And labor of wiring.

Mr. Wheeler—I should say, twenty-five cents.

President Miller—I would like to hear Mr. Bull discuss that point.

Mr. Bull—Mr. President, Ladies and Gentlemen: There is a way that question can be answered to the fraction of a penny.

We will go to our bee yard, say of 10, 20, 30, or 50 colonies, divide that yard into two equal parts; with one-half we will use drone combs for extracted honey; on the other half we will use full sheets of foundation for extracted honey.

At the end of the season we will figure up how many combs we had drawn from foundation; how much honey they had; how much honey we got from the other with full drawn comb; figure selling price of that honey, and you will know exactly what those combs cost you.

Mr. Wheeler—Have you ever done it?

Mr. Bull—I have not made any definite experiment.

Take two colonies of equal strength; put on each one colony drone combs in deep supers; while that colony is filling up and capping over three supers of honey, the one with foundation will draw out in foundation filled and capped and drawn out about two supers in honey.

Mr. Wheeler—Depends on honey flow.

Mr. Bull—You have got to take everything in consideration.

Mr. Bruner—Paint the foundations before you put it on you will find out they will draw out without anywhere near that difference; Hassinger had that figured out last winter. I put painted foundation on and I could not see very much difference between drawn comb and painted foundation.

Mr. Bull—What I was driving at was extracting combs.

I figured it out, 28 to 30 cents, figuring the cost of frame foundation and putting it in and getting the bees to draw it out under ordinary conditions.

Mr. Wilcox—I could allow two cents for wire and foundation and then make them for fifteen cents.

Mr. Bruner—Labor is high in Chicago, for man and bees.

Mr. Wilcox—I have a ten year old grandson who will put them in for nothing.

President Miller—We have to account for labor and the cost of wax—the bees have to take honey or sugar or something to make that wax.

This was figured up in Michigan and the consensus of opinion seemed to be that drawn comb with frame would be worth thirty cents.

What is the hive worth? What is the hive cover and body worth?

Mr. Bull—Hive body, around, wholesale, fifty and fifty-five cents.

Mr. Bruner—Hive body, double cover, will run about $1.50 or $1.65 without frame; that would be in the flat.

President Miller—You have to nail it and paint it; if we allow $2.00 for hive body, cover and bottom board, combs, in tenframe hive, $3.00, that makes $5.00; it takes about 30 pounds of honey to winter bees. What would thirty pounds of honey be worth?

Mr. Bull—About nine and one-half cents.

President Miller—That would be approximately $3.00.

Mr. Bruner—Now we have $8.00. Now what are the bees worth? Are the bees worth $2.00—that makes $10.

(We see bees advertised and sold for $4.00 a colony. I winder if it would pay us to sell bees at $4.00 or $2.00?)

Mr. Stewart—It depends on how tired you are of them.

Mr. Kindig—I never pay over $3.50.

President Miller—According to this

figure you evidently bought them for less than they were worth.

The A. I. Root Company makes a business of selling bees, and I have noticed their quotations, $10.00 to $14.00 per colony. It looks to me as if they had figured it out pretty close to what the bees are worth to them, with a reasonable profit added. I know in the vicinity of Indianapolis, if you want to buy bees in the spring, you have to pay $10.00 to $12.00 a hive.

Mr. Bruner—What would they be worth in the spring if they are worth $10.00 in the fall?

Mr. Bull—You would have to figure on winter loss.

Question—Selling your honey—unripe honey—why?

Mr. Wilcox—If you have it you should sell it for what it is worth, and tell them what it is; let them judge for themselves; if they like it, let them pay for it what they will.

President Miller—When honey first begins to ferment you can stop it by heating it; the foam will come to the top; if that foam is skimmed off it will not affect the grade of honey to any great extent; it can be used in baking and cooking if it has not gone too far.

I sold half a dozen barrels to a druggist to make it into cough syrup; I told him to boil it and he did.

Question—Is it not advisable to buy queens from outside sources in order to get new brood in the yard?

A member—I think so, if a man has not time to raise his own queens, I think it is the proper thing to do.

Mr. Anguish—I do not see why we should not keep up our race by crossing; I make a practice of trying to bring new blood in; I think it does a lot of good.

President Miller—I know that is the theory of a great many bee-keepers who have not knowledge in regard to the facts in the case.

Is there anybody here who knows that crossing improves the stock?

A member—I buy them because we have black bees in the neighborhood.

Mr. Wilcox—For the purpose of changing the blood, I would never buy, if I had as good as I could get to start with.

I am not so much afraid of inbreeding as some people are.

There is some danger no doubt; imperfections will be transmitted in cattle, and with bees there is little danger. I would not change for that purpose alone.

President Miller—I think there is very little danger from inbreeding in the case of bees, and it is very good not to cross strains.

Mr. Bull—I would like to have somebody tell me how I can tell if my bees are as good as I can buy outside if I do not buy outside and try them out?

Mr. Wilcox—Buy from the outside until you have as good as you can get them.

President Miller—I think Mr. Bull has reference to the remark I made a while ago about raising better queens than I can buy. I buy queens quite frequently and compare them and find my own queens are better than I have been able to buy for some time. I think we should all buy queens occasionally.

Mr. Bull—Maybe you did not find the right queen breeder. It took me seventeen years to find mine.

Question—What would we do with black bees if we have European foul brood?

President Miller—I would say—get rid of them—Italianize.

Question—Where is the best place to keep combs of honey for spring feeding?

Mr. Anguish—Right in the hive; put it there in the fall and let the bees take care of it.

President Miller—If you have more combs than you have room for in your hives, then where will you put them?

Mr. Bull—A warm, dry place.

Mr. Anguish—I have been practicing that for quite a few years. Feed them about ten pounds more than they need, and let them take care of themselves.

Mr. Wilcox—I have decided that it is best for me to feed those that I know need it in the fall.

But I do not know until I carry them into the cellar, and that is too late.

Place more than enough combs over and examine them after they have been flying a couple of weeks, and feed them when they need feeding, but if you have a lot of empty combs you can extract them in the spring and save honey; warm them up and extract them.

Mr. Wheeler—The way I do is to—I have a shallow extracted super, and quite often in the fall you cannot tell; strong colonies will consume more honey than weaker ones. I would not

think it policy to make each hive say twenty or thirty or forty pounds.

In the spring of the year you can tell which colony will need the most by the weight of them. At that time of the year I put my shallow super underneath and the bees carry up the amount they need. I never take off the cover until after fruit bloom; keep the covers tight and sealed. Do my feeding from below.

President Miller—Don't you find they may take up more than they need and clog the brood combs? If the super is placed under they will take it all up; if you have very much of it they might clog the brood comb so as to restrict the laying of the queen.

Mr. Wheeler—I don't like to put it on top.

Mr. Bull—Use queen excluder.

Mr. Stewart—How many hives of bees out of ten thousand did you ever see have too much in the brood chamber in the fall?

President Miller—I don't think they have too much in the fall, but in the spring. If you have a slow queen you frequently find combs clogged below and no place to put in the brood.

Mr. Bull—I know I have had some colonies that were extra heavy when I took them out in the spring and I was worried for fear the queen would not have room enough, but somehow or other the honey disappears.

Mr. Wilcox—I know the bees have carried it and put it in the super; it disappears; it goes right up.

Mr. Bruner—You have heard what big hives the Carnolians have to have or they won't do business; you have heard about those combs in the south like that.

The finest bees I ever saw in the spring, I wintered in two stories, ten frame brood nest all summer the year round; the excluder was never taken off the top of second story except to get frames out occasionally; those queens were never crowded in the brood nest and never lacked stores and they wintered without protection.

They had the honey there and they lived in a natural sort of way. They always had honey in the fall or winter and had room to breed in; the only thing was to see that they had the right sort of queen.

President Miller—In a cellar you would find it a pretty difficult matter to carry in and out the double hives. It is not practical to use double hive body in wintering where the bees are wintered in a cellar.

Mr. Bull—In regard to that double hive body: I winter five or ten every winter in two story hives. Put the two together and run them that way sometimes all summer; I cannot see any difference; I get just as much honey out of ten frames as twenty.

The idea is this: If you put it in twenty combs you will have a couple inches of honey over the top with third or half frame full of brood, whereas, if that comb was down below, maybe a couple inches square in each corner of frame and rest of the frame top to bottom solid with brood.

A member—Won't they sometimes eat up all the honey?

Mr. Bull—When you set your bees out in the spring those hives are pretty well filled with honey.

President Williams—It is getting late, and we will now adjourn until tomorrow, Tuesday morning, at 9:30 o'clock.

MORNING SESSION.

Second Day—December 5th.

Convention called to order by President Miller at 10 a. m.

President Miller—It was suggested by Mr. Bruner and others that a committee be appointed for next year to ascertain the condition of the crops and to recommend a price at which bee-keepers should sell their honey. What do you think of the proposition?

Mr. Roehrs—Is it meant by that that this committee will know of all the members of the society what the prospects are and what is coming in and recommend the retail and wholesale price? I think that is a good idea. It seems to me at present there are some individuals who have the means to get in touch with all the bee-keepers and know exactly what their crop is, and inquire at what price they are willing to sell and sell under the market price, so we could do away with that and have all the bee-keepers get the necessary information and get an idea of what the prices really are and ought to be, and it would be a great benefit to the association.

Mr. Anguish—Give us a word or two about the mode of operation in Canada.

Mr. Anguish—Of course, I kind of

outlined it, but I suppose there were some not here.

The way we have operated in Canada has given us good results. You may think it is kind of a binding thing. It is co-operation but not an incorporated thing, and it gives the bee-keepers an idea of what is in the country.

You are going now at it in a haphazard way; you do not know what is in the country; you know nothing about it. You see the reports coming out sometimes in the Journals of enormous crops and people selling their honey and not getting what they should for it. They are a good deal in the game like the railroads are, to get men to go west. They come out with great glowing reports about our crops, until they get men out there; they are working it for themselves, looking after their end of it. They should be at it in our interest. We produce the goods and why should we not get the money?

Some honey is sold for double the money it is bought for; other institutions are getting the money—not the bee-keepers.

For several years, in Canada, it is done by our Ontario body.

We appoint our committee down there—we appoint our officers at Toronto—we appoint them this next week, and then they appoint this committee. They appoint a committee of three and the Secretary goes in as the fourth. They live in different parts of the country. We get the men who will take an interest in that kind of thing.

We send out circulars to the members. In fact they do not confine themselves just to members, but send them to pretty nearly all the members, rather all the bee-keepers in the Province. Our Secretary sends out circulars to every one. Invariably nearly every one sends in. Firms cannot buy honey now until after this report goes out, in a way, because there is no bee-keeper who will sell to them.

After the report goes out that honey should be 11½ cents—they cannot go to bee-keepers before and say, "We will give you six cents;" they will not sell until the report comes out.

Foster & Holtermann did not buy any seven, eight, nine or ten cent honey this year. In fact Mr. Holtermann told me he bought some honey in sixty pound cans at eleven cents; of course, at the time these reports came out that there were such crops, they got weak in the knees and sold it out and he wishes he had it now.

The getting out of these reports is working good with us. We are getting good prices; not as large prices as I heard last year you were selling at; all the way from five and one-half up to as high as twenty cents. Is that not a terrible variation? Everybody selling their own honey.

Mr. Bull—I have the summary we took last night; each one giving the prices they were getting for their honey, to jobbers, to retailers and to users.

I will give you the summary. Honey sold to wholesalers at an average of nine and one-half cents; the range runs from eight to eleven cents. That is for extracted.

For comb, the average price it sold at was sixteen cents to the wholesaler; to the retailers, the average price is fourteen and one-half cents for extracted; the highest being fifteen cents; the lowest, thirteen. That is not so bad.

Comb honey prices to the retailers, sold at 16 2-3 cents.

Let us go over to the consumers' prices, and we will see something: Two to the wholesalers; four to the retailers; and twelve to the users.

Prices: Average nineteen cents for extracted honey; some of us sold it for twenty-five; some of us sold it for ten.

Now, what is the trouble? Somebody is losing nine cents a pound and somebody is gaining six cents.

The idea of getting up this report—and this committee to report prices—is that they should send it out as early as possible, to find out what the profit is going to be, not only to members but to everybody here, everybody who produces honey in this section of the country; you get the report from them and then make recommendation of the average price.

You have the prices sent out by the committee; if you are getting more than that, don't cut your price; if you are getting under that, charge more.

The price to retailers and wholesalers varies three cents the pound; to the users, fifteen cents.

We have a little money in the Treasury. Is there any better way that we

can use it than to get up these circulars?

President Miller—Shall we have this committee, is the question? Shall we appoint such a committee or elect, what is your pleasure?

Mr. Ulman—I move that a committee of three be appointed, including your taking in the Secretary, making it a committee of four altogether.

Mr. Hassinger—I should like to ask how that committee is going to determine that and whether they are going to estimate those prices just for this community or for the United States.

Mr. Ulman—I was very much interested in Mr. Anguish's suggestion as to how they do in Ontario.

It seems to me at this meeting here there is a gathering representing several different states, and, if each member when he goes home will get in touch with his secretary, and have his secretary get in touch with the secretaries of the Association in various states—say in the central states—by doing a little co-operative work among the different State Associations we can get a pretty fair idea of the amount of honey that is being produced and the price it is bringing in various places.

Mr. Wilcox—I can see there is something more to this than heretofore talked about; we must fix a region of territory in which we shall operate. We cannot cover the whole United States; the postage alone would exceed our income; we must restrict this investigation to certain territory, and as this Chicago market is the great central market of the west, it would be well to take any territory tributary to this market.

Perhaps four states might be sufficient, and the other states might be governed by it: Illinois, Indiana, Wisconsin, Michigan, Iowa, are pretty good honey states, and convenient also.

It would be a good plan to include Iowa but we cannot go too far without giving too much work to this committee.

Mr. Bull—In regard to how far we can go: I have a list of 1600 names of bee-keepers—and that is about a little over half in Illinois; there is quite a number from Indiana, some from Michigan, and a few from Iowa, and a good many from Wisconsin.

I think we would have to limit ourselves, say, to southern Michigan, northern Indiana, Illinois and, say, the southern part or maybe all of Wisconsin; maybe a little of Iowa.

If you reach anything like the majority of people there according to the way we have this list here, it would run up to two or three thousand names; in other words, we want to catch the honey that comes to Chicago.

You would have to send out notices which would cost a penny apiece for stamps alone, besides your printing.

Then you would have to send another notice of the prices to the 2,000 names; you would have $40.00 alone for postage stamps and printing extra, but the printing would not be so much. I think I got 1,600 printed last year for four or five dollars.

Mr. Wilcox—If you are going into this state, I would suggest you take in, some way, Mr. France, for he is paid by the state and he has a list of bee-keepers—a list of every bee-keeper in the state he can possibly obtain, and he has been getting that list for fifteen or twenty years, and keeping it up.

How many colonies each one has—what the yield of honey is—

This list he has and it can be obtained from him more reliably than from the bee-keepers direct.

Mr. Bull—In Iowa you can go in all directions, while Wisconsin has nothing much to the north or east.

Take southern Indiana or something like that, it would not be so important. We would like to have as large a per cent of the bee-keepers as we can get but we have to go as far as we can with the money we have.

Mr. Ulman—My idea would be to go as far as our means would allow, and then try to do a little co-operative work with the secretaries of the Associations, and they should be to a large extent in touch with the situation in their locality and in the state, and they ought to be able to give you some pretty valuable data on the subject.

Mr. Roehrs—It seems to be all right as to our neighboring states and places, but is it not a fact that a big amount of honey out west is dumped into the Chicago market?

Mr. Bull—That is true but has absolutely no bearing on the prices we are selling to the consumer.

When honey comes from Colorado and from California—and it goes on the market, that honey has to be sold at a reasonable price because it cannot be sold otherwise.

Mr. Roehrs—Last July, when everybody reported at our Convention he was expecting a big crop of white clover honey, everybody felt—"If I only can dispose of my honey first."

Now this year, with no honey to amount to much—it has been dumped into Chicago from the west, and the prices are going up—so I think it has a little to do with the prices—coming from the west.

In California and in Colorado, in the irrigating regions, they are raising honey much more than we are.

I think we should know what may be expected from the western country. This year they have no honey crop whatever, and if that honey had been in the market I know at my place the prices would have been different.

Mr. Bull—The wholesale figures do not have much variation. This committee cannot say very much in regard to wholesale prices. If we can control the retail prices amongst ourselves we have accomplished a wonderful thing.

Mr. Kannenberg—If our Secretary should go to work and print these pamphlets and send them out to Wisconsin, Iowa and Michigan—why not go to work and co-operate with all these other associations in Wisconsin, Indiana, Michigan, and so on, and let them do their share also, and appoint a committee the same as we do, and I think under that condition we can save some money and have a little left in the treasury.

President Miller—I think the right committee will take care of that; the limitations will have to be considered—go so far as we can provided they have the funds to do with and the time to do the work.

Now we have the question before the assembly: Are you ready for the question—

Shall such a committee be appointed?

All in favor of appointing such a committee, signify it by saying Aye; contrary No.

Motion carried.

President Miller—How shall this committee be appointed?

Mr. Wilcox—I move the officers of this society or the executive committee constitute that committee.

President Miller—I object to that, personally.

Mr. Bull—We do not know who the officers will be; they may be men who could handle that all right and they may not be.

I would say appoint those men—whether officers or not—the officers will have enough to do without shouldering them with more work.

Mr. Wilcox—I might amend that motion and say, the officers who will be elected.

President Miller—I think we should be very careful. We should appoint representative men; they should be producers rather than dealers. They should be one from each section; we must watch those things.

Is it desirable to the assembly that the Chair appoint these men?

Mr. Anguish—I should say it should be left to the officers to appoint these men.

President Miller—There is a motion before the house—Mr. Wilcox's motion.

President Miller—Is there any other motion? It has been suggested that the committee be appointed by the Chair; is there any motion?

Mr. Kannenberg—I make a motion that a committee be appointed by the President of the Association.

Motion seconded and carried.

President Miller—In the appointing of this committee we want to represent the different sections; we want them to be producers rather than dealers, although they may be both.

Mr. Kannenberg—I was not here last night—but has this Association joined the State Association?

I would make a motion that this Association join in a body the Illinois State Association.

Motion seconded and carried.

President Miller—We will have a paper by Mr. L. C. Dadant of Hamilton, Illinois, on the Prevention of Swarming.

(Similar paper was read at the Springfield convention—see page 77 this report.)

President Miller—This is a very interesting paper.

Mr. Roehrs—I am very much pleased with this paper. There are some very vital points, and I need knowledge; I

would like to get some information about bringing the colony up as was stated by Dr. Miller—

Have the super filled with eighteen or twenty combs of brood for the season. Which is the best way to get that?

Do you add another super and let the bees have their own sweet will of going up stairs and raising their brood or is it better to take brood, except one frame of brood with queen, and place them down stairs and have the other on top?

Mr. Dadant—That is all Greek to me because we do not use the Langstroth hive. We use a large hive; the capacity is equal to about two eight frame Langstroth hive, but Dr. Miller uses that method.

As I understand it, he simply adds the second body and lets the queen go up into it if she pleases and fill it and she pleases in nearly every case if she is any good at all.

And then he takes, when the honey crop starts—crowds all the good in the lower story and adds supers to replace that second story.

Mr. Roehrs—Does he use a queen excluder?

Mr. Dadant—I could not tell you that; we do not use queen excluders.

A member—I know Dr. Miller does not use an excluder.

Mr. Roehrs—We talked last night about using a queen excluder as very important. We are running for extracted honey.

Mr. Dadant—If you are running for extracted honey with ten frame Langstroth hive you pretty nearly have to use queen excluders or your queen will go up.

Mr. Roehrs—To build up the colony, would you use any queen excluder at all?

Mr. Dadant—I do not think so. I think the usual method is to give them the two stories without any excluder whatever, and let them fill that with brood until the honey crop actually starts, and then simply crowd back to one brood chamber and add your supers with queen excluders between.

Mr. Wheeler—I have been watching this question for several years.

Mr. Dadant advocated the same treatment for the prevention of swarming long years ago when we had the National in Chicago.

I have tried everything in that line to prevent swarming except one or two things.

I have tried ventilating below; I have tried the addition of brood chambers, early. I did all that but I have been a persistent user of nothing but starters in my brood frames and in that way I have reared a good many drones.

I believe that the question of drones has more to do with it than anything else unless it is the size of the hives that Mr. Dadant uses. He has used that large size hives for many years.

The size of the hive and the amount of drone I think cuts more figure than the amount of room for the queen breeding, because I have tried the addition of supers, but of course they were Heddin brood nests—but that does not stop swarming with me.

And I have never been able to stop it. This year it has been worse than ever. I do, though, raise lots of drones.

Another thing I notice: Dearth of honey just before the honey flow when drones were killed off in order to get rid of the surplus eaters; that would seem to diminish the swarming.

The hive has considerable to do with it—and the amount of live, husky drones that were flying in and out.

President Miller—Would it be dearth of drones or nectar coming in that would produce swarming?

Mr. Wheeler—This year I had left over a lot of extracted combs and put them underneath and kept them going through May and up into June, and they kept their drones and when they got white clover they began to swarm.

They kept their drones and did not kill them. Other years I had them killed because I was short of honey, and those years I did not have trouble swarming.

Mr. Dadant's neighborhood I believe has something do with it. I do not believe he could do the same in Illinois.

Mr. Dadant—I do not believe that has anything to do with it.

Years back we bought Langstroth hives and tried to give them the same treatment as we did our large hives. Sixty per cent of them swarmed—while only ten per cent of ours swarmed.

The size of the hive and everything

goes toward helping cutting down swarming.

In the matter of ventilation, we are sure that ventilation has much to do with it.

You take a colony, the whole front is covered with bees; we have as many as five and six supers; if they hang out in front and are not comfortable they have not enough ventilation; and they are going to swarm. It is a natural tendency; they have got to get relief.

This matter of spacing between frames—and the matter of ventilation —means a lot to the bees.

Mr. Wheeler—I want to ask you one thing: Did those Langstroth hives contain drone comb?

Mr. Dadant—That was my father's experience before they used foundation to any extent but sometimes there were no more drones in those hives than in proportion to our large hives.

Mr. Bull—Were those ten frames operated as ten frame hives?

Mr. Dadant—As ten frame hives.

Mr. Anguish—Talking about ventilation; You would not leave them until they were hanging out, clustering out there—I do not think your ventilation would stop the swarming.

Mr. Dadant—No, we aim to prevent that to begin with.

A member—Does Mr. Dadant consider it necessary to examine all through the season for queen cells to see if swarming is taking place?

Mr. Dadant—I do not believe we looked at the colony all summer to see if they had queen cells. We would look outside and top of supers; if there was the least sign of bees hanging out we would give them more ventilation.

Whether they are laying out or not if the colony is strong when they commence to gather honey we lift the hive and slip under the boxes—then the next time round we do not bother.

We have over five hundred colonies and we never look for queen cells.

Mr. Moe—The Dadants have simply extracted honey. Some of us that are comb producers use eight frame hives only, and we know what this swarming means.

Every little while the Dadants have some article on swarm prevention.

I want to call attention to one or two things:

I am radically wrong or some one has misunderstood Dr. Miller: At the beginning of the honey flow he puts the queen below and puts on an excluder. I am familiar with his writing on that point. I know that would be the thing to do.

If you don't, you will have a lot of brood and stuff above, and when you come to your extracting work you will get that in your honey. For that reason of course you want your queen below.

I tried to use swarm control. Some of these things seem so radically against nature it is out of the question to argue them.

There are various methods by which we can control swarming.

Some of us have eight frame hives and work for comb honey.

We have got to crowd the bees more or less in order to get a fine section of honey.

When I had black bees I could figure more accurately; they will not swarm until the first queen cell is capped; and then at most nine days after that young bees hatch you will get the full benefit of your fun; you want to be prepared!

Mr. Moe—With the Italian bees, the Italians will swarm without any preparation for swarming whatever, not even queen cells started, not as much as an egg in the queen cells; don't you see the picnic some of us have working for comb honey that Dadants do not have, working for extracted? When I had black bees I could figure more accurately.

President Miller—I find the black bees are worse than the Italian.

Mr. Dadant—That is true about extracted honey; there is no doubt you can control swarming much more readily, but at the same time you can control for comb honey much more than is controlled by bee-keepers if you follow our methods.

In the first place, I can tell you the size of hive makes a difference; in an eight frame hive the queen has not the room that she has in a ten, if she is any good.

Secondly, you prevent the rearing of drones by using full sheets of comb foundation; that is bound to help.

Mr. Moe—Oh, I invariably use Dadant foundation.

Mr. Dadant—There is no doubt that the spacing of one and one-half inch

between brood frames will admit more bees and have a tendency to prevent swarming much more than one and three-eighths inch, which is more commonly used by bee-keepers.

Mr. Bull—Now, in regard to handling this swarming problem, at the start of white clover flow is when we have the most of it. If it is a bad season for swarming, like last season was, I take that brood away. You have all admitted you have to use two hive bodies to accomplish that. Put that brood in one story—fill up foundation with comb below. Put that brood on top, leave it for ten days; then go to that brood, destroy all the queen cells unless you have good stock you want to rear queens from. Better buy queens from the south; set that hive of brood off; at the end of 10 days you have taken all that brood and work from the old colony; they are storing honey; set them on the new stand and all your workers go back.

I have had colonies so set off and given them a young queen before the end of clover season give me 50 pounds of honey. It is one thing to prevent swarming and another thing to get all the honey you can.

I keep my bees in ten frame all the time.

Mr. Wilcox—When you put a young queen in from the south, do you ever have anything? Do you notice an increase when you introduce a young queen?

Mr. Bull—I put her with brood on the new stand.

Mr. Wheeler—Is any brood connected with the swarm?

Mr. Bull—Simply set it on top over the supers for ten days, then leave it off on another part of the yard.

Mr. Wheeler—You use the queen excluder?

Mr. Bull—Yes.

You can set that brood off and make a new colony and get a good crop of honey from it the same year; it takes probably five minutes or less to operate on that colony at the opening of the honey flow and then you forget them.

Mr. Anguish—All these things look all right, but I would hate to go through the work, and more than that, you take Mr. Dadant's case, he has got 500 colonies of bees. I suppose he has got all he wants; with your method he would have 1,200 one year and the next year 2,400. At that rate you would soon have a terrible lot of bees and you have a lot of work all the time going on. It seems to me the more you can keep bees together, especially in our country, keep them in a body, something on Mr. Dadant's plan, the more honey we can get. Our seasons are short. If we were stretched out over a long period it would be altogether a different thing.

Mr. Bull—About getting 1,200 or 2,400 colonies—around the fall of the year after your fall honey flow, pick out half your best queens and kill the other.

Dadants get what honey they can with as little work as possible, and some of us get all the honey we can and use as much work as we can to get it.

Mr. Wheeler—Get all the honey we can and do it with the least expense possible; I have tried some experiments you people have not, possibly.

I tried an experiment on ventilation; it might cost you a good many dollars to do it; twenty years ago I cut down a lot of eight frame Langstroth hives to Heddin; I had the rims left and kept them. I tried all sorts of experiments with those rims—cross ways on bottom board, gave the bees all sorts of ventilation, and it had no effect I could see on swarming.

I do not believe that ventilation from below has much to do with it; the bees are peculiar about their ventilation.

But do not go to the expense and trouble of having a lot of rims made, thinking this is going to cut any ice, because I do not think it will from the experiments I made.

President Miller—We have one or two important papers coming soon; whatever you have to say, make it as brief as possible; we will try to hear these talks and the papers, too.

Mr. Davis—I see there are two classes of men here; one man has got money and the other has got brains; the man who has money can make it with his money, but the man who has brains has got to make it with brains and labor, too.

Therefore we take a few bees and make a whole lot of bees out of them; they take a whole lot of bees, make a

little money, according to the amount invested.

We both work on that system; therefore the man who has little money and lots of brains, and is not afraid to do a little labor, can make twice as much as the fellow does with lots of money.

Mr. Kannenberg—One question I would like to ask Mr. Dadant. I have tried to prevent swarming also, and in raising the bottom board I raise the cover of the hives. Did he ever do that? I know it helped me. When my bees were laying out I gave them room on the top and they got into the hive and were quiet.

Mr. Dadant—You did not leave it open?

Mr. Kannenberg—Left it open for weeks.

Mr. Dadant—We never tried that—never had to; if it gets cold at night it might not be very good. If your colony is real strong it probably would not hurt.

Mr. Dadant—What do you do if you have a storm?

Mr. Kannenberg—Just raise it about ½ inch, and don't leave the cover off.

Mr. Dadant—There is circulation through the brood chamber only.

Mr. Kannenberg—I have tried putting the queen down below without excluder and my queen went up into the next hive and left the lower empty.

President Miller—The question here asked in regard to swarm control with comb honey was not satisfactorily answered.

I would suggest that you read Doolittle's book on Out Apiaries.

Mr. MacNeil—I would like to ask Mr. Dadant what is the distance from center to center?

Mr. Dadant—One and one-half inches.

Mr. MacNeil—You would have to have a specially built frame.

Mr. Roehrs—Change ten frame to a nine.

Mr. MacNeil—Would you consider a twelve frame Langstroth hive would be equal to your Quimby hive in keeping down swarming?

Mr. Dadant—It is in the depth; I would rather have a deep ten frame than a shallow twelve.

D. L. Hoffman, of Minnesota, has changed practically all his ten frame Langstroth hives to ten frame Jumbo—Quimby depth with Langstroth length.

Mr. Moe—As to the suggestion in regard to queens from the south—if young queens you will have no trouble.

You are all familiar with the year 1913—a great honey year, and then of course we had swarming as in no other season.

You save having so much trouble if you have a young queen.

With me, I rear my queens. I have a boy that takes a great delight in it. You can improve your stock, as well as getting them from the south.

My object is to introduce some of those queens early in the season as possible, to control swarming.

President Miller—We will have a recess and then hear from others who have something to say to us.

President Williams (After recess, ten minutes)—We are very fortunate in having a man with us who is known practically to every bee-keeper in the United States, Mr. E. R. Root, of Medinah, Ohio.

Mr. Root—I was not able to get in yesterday as I had planned; some of you saw by the papers that we had a little fire in Medinah; it was set in six different places; there is a fire fiend operating in our locality. There were piles of lumber six or seven hundred feet left to burn, and the fire melted the car wheels that stood on the track; the fire lighted up the sky so that it was noticed by towns twety-five and thirty miles, even forty miles away, and the fire chiefs offered the services of their crews.

It looked as if the entire bunch of lumber was going, but we confined the loss to 21,000 and saved the bulk of our best and choicest lumber.

I had intended to be at your convention yesterday morning—but I wanted to go to this place—and a very interesting thing in connection with this discussion occurred. My brother-in-law had some hives, perhaps about one hundred feet from the piles of lumber—one hive in particular, a nice colony, had the side burned off from it—you could see the combs—there was the metal cover, and under the metal cover it burned the wood, burned the thick top bars, so that they were charred down half way.

Everybody supposed that colony was

gone; the next day or two we found that colony as nice as it ever was, not a bee dead, the combs all right except the outside.

An interesting thing about it is—I don't believe any one knows how much bees ventilate when necessary.

You know what the hot season is, but just imagine it hot enough to burn the top of the brood frames, the wooden cover, the comb on one side, burn the hive so that it was clear down, and yet those bees kept on ventilating—one set blowing cold air in and one out.

I do not know what they thought was on, but the bees had not forgotten their job, and they did it well.

Our apiarist went down and said the fire had not hurt them a bit. The bees met me more than half way when I went out to see them.

I told your Chairman, when I came in this morning, that I had not any program, and I do not know but that what I have to say will be in the form of a medley.

I was interested in Mr. Dadant's address, which I should judge is along the same lines as that at Springfield.

I always believed the Dadants knew how to control swarming.

Twenty-three or four years ago I tried the eight frame hive, one story above the other, giving the queen the entire range of two stories, and I found there was something in bigness. When I allowed the queen the range of two stories I brought down swarming.

I went further: Put on upper stories.

You will find that thing mentioned in connection with hives in our book and the Dadant hive has been in there for years. Some one said, "That has been in A, B, C, for twenty-three or four years, don't you think you had better take that out—no one uses Dadant's hive and no one thinks much of that method." I said, "Not on your life; there is the great principle of swarm control; I believe in it absolutely. I know of Dadant's getting along from year to year with only three or four or five per cent swarming."

Mr. Dadant has told you of the seven fundamentals.

They have been using one and one-half inch spacing.

I visited J. L. Buyer, of Ontario, Canada.

I went up to attend a trial, and so I said I would go call on Mr. Buyer. I like to see their yards as they leave them when they do not know I am coming.

Mr. Buyer said to me: "My yards do not look very nice; it is very muddy, Mr. Root, a bad day."

I said it did not make any difference so far as the weather was concerned. But he said to me, "You cannot take pictures."

I said to him, that a rainy day was as nice as a bright day to take pictures.

He said to me, "Mr. Root, you know my hives; I appear in your Journal as one of your special correspondents. My hives never were painted; they are old odds and ends." I said to him, "The bees can get out through the cracks. You are like a good many people who are successful producers—you have eight inch frame hives—Jumbos and Buyer hives and Langstroth."

I said to him, "I want to see how you winter bees."

Mr. Buyer said that he had no particular way—that he used chaff hives, winter cases—two in a case.

I asked him, "Have you four in a case?"

"No, they are too bulky."

I found a medley of hives. I came to what I should call a Jumbo. I told him about Dadant's method of swarm control, and the seven specific fundamentals.

Mr. Buyer said to me—"I have a large hive and wide spacing. I do not believe in drones; I have got lots of room. Come to think about it, I have not had much swarming.

"When I buy real hives I shall adopt that Dadant plan; it works out so well."

I said to him—"You have more swarms than the Dadants report, don't you think the smallness of your entrance has got something to do with it?"

He replied, "I have not thought of that."

I told him I thought it had very much to do with it.

One of the points on which we had controversy was this: I like to have a colony of bees go in with winter nest; I want that winter nest near the entrance. Mr. Buyer mentioned to me: "My bees are on solid slabs of

comb, capped over clear down. I want that large amount of stores."

I said to him—"I would like to look in your hives."

I found a tremendous big colony; those hives of Buyer's were thirty and forty years old.

I looked into those hives and found strong colonies and the bees met us more than half way.

He said to me—"Don't you think they are fine?"

I replied—"Yes, nice Italians."

I said to him—"Let me look down." I saw those combs were not capped over.

I said, "Mr. Buyer, right down in the center is there not a nest there?"

He said, "Not much."

I said, "They have got one, I know they have."

I did not investigate because the bees met us half way.

In connection with the fact of those bees that were next to the lumber that was on fire, being able to keep the hives cool—maybe Mr. Buyer could keep that hive cool by being kept busy—but how many bees it must take with that little entrance!

Mr. Buyer said to me—"Mr. Dadant acknowledges a big hive is quite the proper thing; Mr. Root acknowledges it is—why is it that the Langstroth size of material is sold?"

I suppose it is because the people are demanding it, and it is difficult to get wide lumber; the large hive costs twice as much as some other hive, and the average man is not going to put the money into it.

Mr. Buyer said to me—"Dr. Miller uses the other hive, I guess I can."

Mr. Dadant—I might say about selling those Dadant hives. We have kept them for sale and we keep the Langstroth hive for sale; we sell about four or five hundred of the Langstroth hives where we sell one of ours. So it is practically the price that keeps them out.

Mr. Root—Mr. Bull has a method of swarm control which I believe is a good one, and I believe swarms can be controlled, in Langstroth depth. I won't go into the question whether the labor more than offsets the quantity of honey you get; I will not touch on that.

AFTERNOON SESSION.

President Miller—I have an invitation here from the Ford Motor Company to visit their plant at 39th and Wabash Avenue. They assemble their cars there. Also an invitation from Montgomery Ward to visit their plant.

The next thing in order will be the reports of committees.

Mr. Hassinger—We, the Auditing Committee, find the books to be correct, and that the expenditures seem to be such as would be to the best interests of the Association.

George W. Williams
L. W. Mace.
Edward Hassinger, Jr.

President Miller—Gentlemen, you have heard the report of this committee, what will you do with it?

Moved and seconded, carried, that the report of the committee be accepted.

President Miller—The next report we have is the Committee on Resolutions:

Resolution.

Whereas, The management of this hotel has allowed this body free use of this hall; it is

Resolved, That a vote of thanks be tendered by this body in appreciation of the accommodations and courteous treatment of the management of this Great Northern Hotel;

Resolved, That a copy of these resolutions be transmitted to the management of this hotel.

Resolution.

Whereas, The papers read by the different members have given enthusiasm and interest to the meeting;

Resolved, That the thanks of this Convention be extended to them.

Resolution.

Whereas, This body has received a letter of greeting from N. E. France, and expressing regret on not being able to be with us;

Resolved, That the thanks of this body be tendered to Mr. N. E. France, in acknowldgment of greetings, with the hope that he may be with us personally in the future.

(Signed)

J. C. Wheeler,
A. F. Kannenberg,
F. W. Sievert.

President Miller—You have heard the report of this committee, what is your pleasure?

Moved and seconded, carried, that the report be accepted.

President Miller—The next is the election of officers.

We might have the demonstration by Mr. Stanley.

Mr. Stanley—Mr. President, Ladies and Gentlemen: I prepare the strong colony by feeding it several days and getting it in condition to accept cell; then I remove the strong colony away and put this in its place. I have it in condition to start cells, and put this in place of cells. I shake the bees from comb of strong colony, and run in the cell. These three combs are supposed to be brood combs; no unsealed brood. The cells are already in place just as they are; now, when I run the bees in and, say I run them in at four o'clock in the afternoon today, tomorrow about ten or eleven o'clock the cells are ready to be grafted.

After I run the queenless bees in they will take these cells and cut them down around the edge and polish them.

It would not do to give them royal jelly and larva when they first run in but, when they realize they are queenless, you have much better looking cells.

After your bees are in, there is nothing to be done unless you want to use it in some outyard, but as a general thing we want it in the home yard.

If we should want to take it to an outyard apiary, simply put the cover on and open up the ventilators and you can carry this anywhere.

There is nothing to be done any further until four or five days I look them over. If everything is working all right I should have twenty to twenty-five cells, nice cells, about ready to be sealed. Of course, now, if there is a good honey flow, or in about five days and the time they are sealing these we will find sometimes that they will attach comb to them and we do not want that.

Mr. Wheeler—You put an egg in there after twelve hours?

Mr. Stanley—Yes, about twelve hours.

And about the fifth day, when they are about ready to be sealed, if they are building comb on or anything like that, we slip these right on (illustrating). They will not go further with their comb—the bees can work through there and, on the 14th day, they should be caged up until they are hatched.

You can take this out to an out apiary when you have use for it.

To introduce virgin queens, a good thing I find is to have a ilttle honey. Carry it in your tool box—pour a little honey on so as to get the queen's wings stuck up—and drop her right in.

A member—How do you prepare a colony when you first put the queen in?

Mr. Stanley—That was the first thing I mentioned—feeding it several days and getting it in condition—shaking the bees at the entrance—

Mr. Wheeler—Do you make them queenless long before you shake them in the front there?

Mr. Stanley—No, I sometimes do not make them queenless at all, but sometimes I do; it just depends—it does not make much difference.

Mr. Wheeler—Do you handle larva with a toothpick when you put them in the cell?

Mr. Stanley—That is a good way; I have a little transfer needle that is a little better. In getting your royal jelly—anyone sending out queens, it is an easy matter to have lots of royal jelly on hand. You can have a little jar. I go through my colonies, find where they have cells two or three days old (not sealed) and I gather it up and put it in my little jar and cork it up; that is good for a month. It will keep all right.

For instance, I will do this today; tomorrow, I want to use this; I will put a little water to it and stir it up; leave it on top the hive in the sun so it will warm up, so it will not chill the larva; then I take a brush and put a little in and wipe the edge of it off, and then transfer the larva right into it.

I can do a whole set in from seven to nine minutes, but if you do not have everything ready it will take longer.

Mr. Wheeler—It takes good sight to do that.

Mr. Stanley—You soon get accustomed to it—after you know what you are looking for you know the age of the larva.

Mr. Kannenberg—How old would you take the larva?

Mr. Stanley—It should be just a little larva, that you can see it plain.

Mr. Kannenberg—That is hatched out of the egg?

Mr. Stanley—Yes, just so it is well formed and looks like a new moon.

Mr. Wheeler—Any trouble to get it up?

Mr. Stanley—No, there is no trouble; run your transfer needle around; when you put it in slow you put it in further edge and the royal jelly will take it off; I put it in slow until it touches the royal jelly.

A member—Do you feed those bees?

Mr. Stanley—No, supposed to be all the honey and pollen they need in those three frames, and, if you should want to start the entire lot, these can be transferred to upper stories of any colony.

You can take any frame and cut part of the comb out and put two little staples in to hang them in.

Mr. Kannenberg—Those queens which you do not use and want to save them, how can they be fed?

Mr. Stanley—You can take and lay them on top of the hive between the combs. If there is no honey coming in and you give it to queenless bees, they might not take care of so many as you like.

Mr. Kannenberg—You used to have zinc?

Mr. Stanley—I have had no trouble with the cages I now have but on the zinc cages we have heard of them going up through the excluder.

Mr. Roehrs—You have stated you transfer the cells sometimes as soon as they are sealed up.

Mr. Stanley—I transfer them from cell starting hive into upper story of good strong colony, and all they need is the heat of the bees to hatch.

The larva at nine or ten days old are pretty nearly complete but their wings.

President Miller—I understood you to say that sometimes you shake bees in front without removing the old queen?

Mr. Stanley—I feed my bees if I am going to. I look over my colony and find my frame with my queen on and set her to one side. I shake everything else. We cannot have any queen in there and get cells. I believe I did once or twice have a virgin queen, by mistake. I found no cells. I thought—"What is the matter." I looked around and finally found the cause. You might start a hundred lots and never find that.

President Miller—I believe it is the practice of most queen breeders to use fresh queen jelly—not to have it more than a few minutes out of the cell; if you keep it a considerable time it gets hard. You can thin it down any thickness.

Mr. Stanley—I have tried other things to substitute. You do not need royal jelly. I have done it. It is only just something so that the larva do not dry up until the bees can take care of it, and that will only be a few minutes.

If you put honey in they will clean the cell out and want to start over. I have kept them until the bees would take care of them on condensed milk.

Mr. Roehrs—It takes the place of royal jelly sometimes.

Mr. Stanley—I have done it; it is only just to keep that larva; I suppose it would live on condensed milk a day or two. It is only just to keep it from drying out until the bees could take care of it.

Of course you can try anything you want to but you have no trouble getting royal jelly if you have queenless bees.

President Miller—The next thing in order will be the election of officers. Nominations are in order—Who will you have for President?

A member—I think the best man we could have for President would be the man who is now in the chair—therefore I nominate Mr. E. S. Miller for President.

Mr. Dadant—I move the nominations be closed.

I move the Secretary cast the vote of this Association for E. S. Miller, for President of this Convention.

President Miller—I am always glad and willing to do all I can to help along the cause of bee-keeping. I am quite sure there are other men who are more competent to fill this position, however, I will do the best I can. I thank you.

President Miller—The next thing in order will be the nomination for Vice-President. Who will you have for Vice-President?

Mr. Hassinger — I nominate Mr. Roehrs for Vice-President.

Mr. Roehrs—I thank you for the

favor and honor shown me; I am not in position to take any office.

I would make a suggestion that we take Mr. Kannenberg.

Mr. Kannenberg—For myself, I had the honor of being President and had all the honor I wanted. I think there are other members in this meeting who can do the same thing I could and have done. I think there are plenty of others, and let them have a chance.

Mr. Wheeler—I would nominate Mr. Hassinger.

Mr. Ulman—I second the nomination and move the nominations be closed.

President Miller—We will have nominations for Secretary.

Mr. Wheeler—I nominate Mr. Bull.

Nomination seconded.

Mr. Wheeler—I move the nominations be closed and that the vote of this meeting be cast for John C. Bull for Secretary.

Motion seconded and carried; Mr. Bull elected Secretary.

Mr. Bull—There is some work to this job. I mailed about 1600 circulars in the busy season last summer; I would rather have some one else take a whirl at it.

President Miller—When a man is in office and doing his duty the better he can serve.

A member—How would it be at this time to take up the question of having a field meet again the coming summer, as we did last year?

President Miller—I think at this time I had better announce the members of the committee. I have talked with quite a number of people and got all the suggestions I could in regard to the most available men; we have picked out some men and we will try to get them to serve.

John C. Bull, Hammond and Valparaiso.

N. E. France, Wisconsin.

L. C. Dadant, Illinois.

E. D. Townsend, Michigan.

President Miller—Committee to get information concerning crop next year and recommend wholesale and retail prices.

These men have a great many facts and figures at hand that most of us do not have access to ; they have large mailing lists which will be of advantage.

It has been suggested we take up the question of summer field meet. Who has any suggestions and motions in this regard?

Suppose we take a standing vote on how many are in favor of having a field meet?

Rising vote showed thirteen (13).

Mr. Dadant—If you have a field meet you want to make it a success; if it is to be in June, I cannot be there.

Mr. Bull—Mr. Dadant, what would your suggestion be as to the proper date, approximately?

Mr. Dadant—That is hard to say. It looks to me like after the crops are over is the best time, provided you have a crop.

I think along about August would catch most of us; the fall crop won't begin until the latter part of August; the spring crops would be pretty well over unless you have a lot of rain during July.

Mr. Bull—Have to arrange to have it after the extracting of the white clover if you could.

Mr. Roehrs—It seems to me we had the proper time last year; the latter part of July or the first of August, somewhere around there.

I think it is a very good thing that we have in these summer meetings; we can see how people work and do things.

Here we only talk about things and, at such a convention, we can see how things are done, and I think that is more important than to talk about it. I would suggest that we have a field meet at a time when we can all go.

Mr. Bull—During July—July 15th—the swarming season was on. Of course, this last year was unusually late. The late June rains held the clover flow back two or three weeks.

I believe the 15th to the 20th of August would probably be as good a date, it seems to me.

Mr. Wheeler—Dadants had theirs in September.

Mr. L. C. Dadant—That was a little bit too late because the fall crop started the 25th of August; that is the Mississippi Valley crop; the 15th or 20th of August, I believe would be a good time.

President Miller—I believe the majority of those present have voted in favor of a meeting. Is there a motion as to the time of meeting? Shall we vote on that, or leave it for further

consideration? Have you any suggestions or motions as to committees?

A member—I would suggest that our President and Secretary act as a committee, with power to select their helpers; and also set the date.

I make a motion that the President and Secretary act as a committee, with power to select their assistants, and that the selection of the time and place be left with the officers of the association.

Motion seconded and carried.

Mr. Bull—I might say here, in regard to field meetings: This last summer I mailed out, to be exact, 1,592 circular letters of that meeting; that was a considerable expense.

Do we want to go to an expense like that, or simply advertise it through the Bee Journal? It cost me around $30 in postage. I would like to know what the pleasure of the convention is in regard to spending that much money.

We took in thirteen members at that field meet, and spent about $30.00.

Mr. Wheeler—Is there any way of notifying the people?

Mr. Bull—How many would go to that meeting who do not read one of the three journals? None.

Mr. Wheeler—I came because I got your notice. Lots of bee-keepers do not look at the Journal that time of the year.

Mr. Root—I find that our experience in Ohio has been: If we want to get a good large field meet we send cards out so that the card is received a day or two ahead of the meeting. We use the Journals and then send out postal cards to every one, and they are notified a day or two ahead, and then they look up the Bee Journals and see what it is about; otherwise they might not notice it in the Bee Journals.

Mr. Bull—The idea is to put the main notice in the Bee Journals and send out post cards?

Mr. Root—We got in that way three times the attendance.

President Miller—I think that is an excellent suggestion—to send out postal cards.

President Miller—I feel like asking Mr. Root for another talk this afternoon; if he will consent to do so, we would like to hear from him further.

Mr. Root—If I do not tire you out; I feel like talking about now.

How can I attend a series of three conventions, with two conventions held absolutely the same day?

Iowa, the 5th and 6th; Minneapolis, December 5th and 6th.

If you can arrange with the National Secretary of the National Bee-Keepers' Association to set your dates.

Now, here is Dr. Phillips, who is worth hearing; and Dr. Jager, who is worth hearing, and several men you could get outside, from different states, and there would be a certain advantage of bringing together the best there is in all conventions. This convention conflicts a little bit with the other one, but if you would arrange it in the future so that a few of us who would attend all conventions could do so—

Mr. Chairman, you heard me on "Establishing Trade in Honey," and a good many here I think heard me at the Michigan Convention and at the Springfield Convention.

If you want I will give you another talk. The only thing I can think of I gave at Lansing.

I can give, if you desire, Establishing Trade Name in Honey or Bee-Keepers I Have Met.

President Miller took a vote of the Convention and it was decided to have the first named subject—Establishing Trade Name in Honey.

Mr. Root —I would like to bring before you in the discussion of this subject just what every manufacturer of a food product has had to consider throughout the country.

We are in a condition now that is very different from the conditions that prevailed twenty years ago. At that date a great many of the food products were sold in bulk.

There is no use denying the fact you can buy foods today in bulk cheaper than in the package.

I suppose the main reason why foods are bought in packages is they are bought in smaller quantities, and free from worms that get into ordinary food stuffs. Cereals that were ground in the olden days were hard to get without being wormy.

In putting up foods in packages: The directions are put on the back of the package for using the food, the package is attractive, and in such shape that is convenient, and the cost very small.

The trade on foods has been going

more and more towards small quantities.

When you stop to figure that the average working man buys a little of this and that and something else, we must meet the demand, and the result is that the great manufacturers of foods, starting with the Battle Creek people and others, have started out on the proposition of putting up those foods in small packages.

It is no new thing to put up honey in the form of ten cent jars; the only purpose of that package is to give the purchaser an appetite for honey—to introduce honey as a food; to let the people know that honey has quality about it; that it is better than some other sweets.

In selling honey in ten cent packages, you will introduce your honey to the trade, who will buy the larger packages, fifty cents, one dollar or two dollar size.

We are working toward the idea of getting the trade introduced to HONEY.

A few of us got together about fifteen years ago in Chicago, to advertise honey in a National way, and the result was that, although the National Bee-Keepers was then in existence, we organized what was called the National Honey Producers' Association.

The function of that organization was to gather money from bee-keepers in large and small amounts, to assess each manufacturer in proportion to the amount of honey he produced each year; they secured about $2,000. That money was to be used to advertise honey; some dissatisfaction arose as to how this money was to be distributed. It is always a problem when a great many men have a finger in the pie, because each one has his own idea. The result was some dissatisfaction arose; it was said if the manufacturers are going to run this the bee-keepers won't stand a show.

Ater considerable discussion it was finally decided to turn over the amount, $1500, to the National Bee-Keepers' Association, and that amount was given to Mr. France. Mr. France put out some honey leaflets of various kinds and they were distributed, but they did not get hold of the public.

A good many of us thought at the time that the proper way would have been to have used that money in a national advertising campaign—to have put it in the hands of an advertising expert and have told him to make the money go as far as he possibly could to educate the public through the magazines on the value of honey as a food, so that the housewife would know something about what honey was and its qualities, and putting it on the table.

$1500.00 would not be a drop in the bucket.

It cost $6,000 to advertise a page in the Ladies' Home Journal. While that is a large sum I suspect it is cheaper than you can get in most other Journals when you stop to consider the two and one-half million subscribers they have.

The cost in Good Housekeeping is $1,000 a page.

How far is $1,500 going to go when you parcel that out in advertising?

You have to put it in little blocks, and are the people going to see little blocks? And, after the advertising was done and the $1,500 spent, bee-keepers would say that the money was spent and "I expect large results."

When you go into an advertising campaign, you have got to make up your mind you will throw your bread upon the waters, and you will wait a long time before the bread comes back again.

You can see how utterly impossible it seems to be to combine an aggregation of bee-keepers together and have them agree to appropriate twenty or twenty-five thousand dollars.

I think it would be a mighty good thing to do if you can have confidence enough and pick out an expert.

The man we took is the man who put Coca Cola on the map.

(Mr. Root gave a talk on: Establishing Trade Name in Honey at the Springfield convention. See page 41, this Report, for continuation of this paper.)

President Miller—Is there any discussion on this paper?

Mr. Wilcox—I do not want to contradict one word of it, but I would like to confirm by experience what he has said about advetrising honey:

I have been for a number of years Judge of Honey at the State Fair in Milwaukee, and you all know there are

exhibits of bees and honey at those State Fairs.

The people will come first and look at the bees, and they will talk about them, and see the honey, and they ask: "Do you sell honey here?"

There is a large quantity of honey sold—but not until their attention is called to it by the bees, and the honey that is on display. I know from observation that it works.

Mr. Root—I might say, Mr. Chairman, we have had considerable experience along that line. In order to make this live bee display satisfactory, the bees must be fresh; the combs must be clean; the bees must not be confined more than a week; if they are confined longer the bees begin to worry; will soil the glass, and then the exhibit is anything but an advertisement for honey.

The usual plan is to have the display about one week; we have the bees shipped back to us, put in the hive and allowed to fly. We may send them out again, but we have bees that will not live over until next winter and they have got to be replaced so we utilize these bees; put them up in packages and send them out, case and all, with instructions to return them.

There must be ventilation at the bottom because if the glass is too hot it will kill them.

Instruct the grocer not to put them in the window where the sun is shining.

We find that the grocers are fighting with each other seeking to have the display.

If you have a product you want to advertise and you will find some one who is a good talker, put a girl in with your display, you can draw as big a crowd with bees as anything else—but the bees must be put up in nice shape.

Find out where the finest drug store is, and the finest grocery store, and endeavor to have a display in their window. Speak of its value as a food; if you sell honey for its food value you will sell more of it than if you sold it for its medicinal worth; people will buy it in larger quantities.

You will find that the grocers will want your displays and want your honey.

Usually you cannot send out your bees more than once or twice and they are superannuated. We do not ever intend to have our window display where the bees die in the glass.

We try to have the display fresh and nice so that it will attract attention.

In San Francisco the bees have an exit and can fly back and forth.

In the city of Cleveland, and various cities in New York, we have had the streets so jammed that the police said: "Quit that display, because crowds cannot get through."

When they are jamming and crowding, looking at honey—then is the time to push the sales.

Mr. Moe—Be sure to have Dadant's beautiful label—"Eat Honey" and, also, another one something about "If your sweet tooth is a wisdom tooth, eat honey."

Dadants will furnish the Root people those cards, and don't forget to use them in connection with your advertising.

If I may have a minute or two; in regard to honey and advertising—Mr. Root has told you about these great institutions and houses. I might add a little, because it seems that every season changes; no two years do I find I can do business in the same way.

Last summer my comb honey sold for fifteen and sixteen cents. Now, what was the reason? The high price of butter; people would buy honey in place of butter; another thing, the scarcity of fruit. Repeatedly I went to get fruit and could not get it. Fruit last summer was in poor shape and it was expensive; it could not be kept in intense hot weather.

One store sold three cases of honey in a very short time. I discontinued shipping to larger markets because I could get a great deal more right at home than otherwise.

I want to mention a peculiarity between two cities close together; in one place I could sell readily and at the other place I could not sell anything. Some bee-keeper had brought honey in. One store I used to deal with had it advertised in their window for thirteen cents. You can imagine what he paid for it and see what effect it would have on some of us.

President Miller—I have had the same experience in advertising in local papers. I find there is a great difference in the advertising you put in;

some advertisements pull and some do not.

If you just say "Eat honey", I do not believe it would sell very much, whether it is labeled or not.

I tried an experiment: I had a card —"You will not get stung if you will eat Moe's honey." That created some merriment, but I do not believe it sold very much honey.

I had a lot of candied honey, so I had a card—"Did you ever eat candied honey—better than butter, cheaper than butter, spreads like butter."

In answer to that advertisement, I was several days carrying out honey and distributing it.

Another advertisement I had this summer in our local paper: "Tons of honey; we want you to help eat it." That seemed to pull. We sold quite a lot of honey in answer to that advertisement.

President—Now the time is drawing near to a close; we have a few questions here yet, three or four.

Question—Has the Pearce method proved successful?

Mr. Roehrs—What does it consist of?

A member—The Bee Journals have been full of it.

Mr. Wilcox—I know how it is described by him in the Bee Journals but, as for trying it, I never had faith enough in it.

Mr. Root—If I understand it right, the Pearce method is a combination of the Dadant system and the tier up system of smaller frames.

Question—What is the best way to teach people the process of producing extracted honey?

A member—Is it necessary to teach them that? Better teach them to eat it.

Mr. Kannenberg—People sometimes want to know how is extracted honey made.

President Miller—I think I have a process of teaching them. I put my advertisement, printed in red, across here (illustrating), and I hand them one of these every time; it tells the whole story.

Question—What is the best means of preventing the loss of flavor in heating honey?

President Miller—Do not heat it too much or too long.

Mr. Wilcox—The best means to adopt is to warm it up slowly and not heat it very much—not heat it more than 150 or 160 degrees for white honey or 130 or 140 degrees for dark honey.

President Miller—Has any one any other question?

A member—What is the best way to scrape sections? What is the best way to get bee glue off of sections?

President Miller—I can tell you a good way; I would like to have somebody else tell it—Mr. Wheeler?

Mr. Wheeler—Mr. Root, tell us.

Mr. Root—We use several ways; we use mainly a wheel operated by a small motor with sand paper on it.

Dr. Miller spoke about scraping sections on sand paper; one would think that would all fill up; it does not; you have to have your sand paper right.

We have a wheel revolving, barely touching that section this side and that; take that section out and do the other. We have a wheel and a band sets over it, and that sand paper is mounted on it. I think you could do it by foot power.

I am not so sure but what some enterprising manufacturer ought to put that on the market.

The wheel must be about a foot in size.

Put the sections as near as you can to the center.

While I was in Utah a year ago last winter, a man had a machine with seven knives mounted on which the knives stood at an angle; he hardly laid this against it and it would scrape the sections nicely. We tried it—but in the hands of the average person there is danger of getting the finger nail taken off, and if you hit it too quick it would break the combs.

With the sand paper you can skin your knuckles.

Mr. Moe—When you had that in Gleanings the first time I read it with interest but I was afraid to get sand in the honey. I quit because of that very thing. How do you keep from getting sand in the honey?

Mr. Root—There is a little bit of criticism of that; with the sand paper that is one objection, but one thing, there is a little trick in putting it on. I do not believe I can tell you because I don't know. If you turn the sand paper flat and run it this way (indicating) the dust will drop down.

You must have the sand paper about one-half way between the very coarse and the very fine paper. The coarse sand paper clears itself and frees itself better than the other.

Mr. Wheeler—I tried that sand paper method this summer; used an 18-inch drum; I found it was pretty large; I should think a foot would be large enough.

President Miller—Those processes mentioned are very good where you have hundreds of cases, but for a little fellow there are some simple processes almost as good.

If you get an emery wheel and turn the wheel by hand—fasten the paper on—but suppose you have not enough to pay you to buy one of those?

Lay your sand paper down flat on the table and take your section, and go over this way first on edge and then on the side, and you can clean two or three sections a minute that way.

I use a knife to scrape off the roughest of it; I go over carefully then with sand paper and make the old sections even look very good.

Mr. Wheeler—To clean the sand paper I use gasoline.

Mr. Root—Use a brush?

Mr. Wheeler—I simply rub it with a cloth, and then throw the cloth away; then burn up the rag.

President Miller—A sheet of sand paper, if the weather is cool, will do for two or three cases of honey, and, as Mr. Root suggests, I prefer rather a coarse sand paper.

Mr. Wheeler—I would like to know if any one has tried emery wheels for that kind of work. I wonder how a coarse emery wheel would work.

Mr. Root—I think we tried it; it darkened the wood a little. Emery has a great deal of black lead in it.

Mr. Wheeler—I tried wire screen in place of the sand paper this year and that has the same effect; it darkens the wood.

President Miller—Mr. Bull suggests that we consider the place of meeting for the field meet. Where do you wish to have it?

Mr. Simmons — My understanding was all that was left to the committee consisting of the President and Secretary.

President Miller—How many here would prefer Valparaiso? Raise your hands, please. Valparaiso is about fifty miles southeast of here, in Indiana.

Five.

Mr. Root—I think it might be interesting you to see Mr. Miller give a demonstration as to how he looks into a hive and sees the conditions.

Mr. Wilcox—For the field meetings in Wisconsin, we hold them where we get an invitation; if some bee-keeper will invite you that is the place to go.

Mr. Bull—I invite you to go to Valparaiso.

President Miller—All in favor of Valparaiso for the field meet, rise.

Fourteen.

President Miller—All those in favor of Chicago or some other place, west or south?

None.

Mr. Bull—I might say here now, I have had probably a dozen invitations to hold our Annual Meeting. Does anyone prefer a change or are you satisfied with this pleasant place? One thing, we have gotten the habit of coming here.

I believe it is as good a place as we can get.

Mr. Wheeler—I move we stay here.

Motion seconded and carried that we continue to hold our Conventions at the Great Northern Hotel.

President Miller—A motion to adjourn will be in order.

Mr. Wheeler—I move we adjourn, to meet at the call of the Executive Committee.

Motion seconded and carried.

President Miller—The convention stands adjourned.

ALPHABETICAL LIST OF MEMBERS

For the Year 1917 with Statistical Report for 1916.

	No. of Colonies, 1916	Pounds Comb Honey	Pounds Extracted Honey
Ackman, C. C., St. Francisville, Ill.	....	....	....
Acom, H. O., Niantic, Ill.	....	....	....
Aikman, H. L., Waggoner, Ill.	2	350	....
Akines, J. L., Girard, Ill.	10	850	....
Albright, W. E., R. 3, Springfield, Ill.	7	450	....
Ambrose, Valentine, Wenona, Ill.	....	....	....
Anderson, Jas. L., Harvard, Ill.	....	....	....
Anderson, Oscar, Pawnee, Ill.	3	65	200
Anthony, A. B., R. 5, Sterling, Ill.	75	5550	1500
Arnold, F. X., Deer Plain, Ill.	250	6000	6000
Arrowsmith, Mrs. H. P., Gibson City, Ill.	32	700	100
Augenstein, A. A., R. 1, Dakota, Ill.	47	600	2900
Bachelder, N. C., Harristown, Ill.	2	50	....
Baker, W. H., R. 20, Rochester, Ill.	....	....	....
Baldridge, M. M., St. Charles, Ill.	....	....	....
Baldruff, Henry, Beardstown, Ill.	....	....	....
Baldwin, James, Naples, Ill.	75	2500	2000
Barkemeyer, B. D., 450 Marion St., Oak Park, Ill.	....	....	....
Bartrch, F. R., 330 W. 69th St., Chicago	8	450	160
Baxter, Dr. A. C., 1418 Holmes Ave., Springfield, Ill.	....	....	....
Baxter, E. J. (President), Nauvoo, Ill.	....	....	....
Beaver, Wallace R., Lincoln, Ill.	....	....	....
Becker, Chas. (Treasurer), Pleasant Plains, Ill.	11	150	1380
Belloth, Fred G., Pulaski, Ill.	8	900	....
Bender, C. F., Newman, Ill.	94	11124	200
Bennett, C. S., 1022 Jackson St., Charleston, Ill.	25	1200	....
Benson, August, Prophetstown, Ill.	17	500	1000
Birlsmith, Chas. A., Mt. Auburn, Ill.	....	....	....
Bishop, Elmer, Virden, Ill.	34	850	980
Bishpo, Frank, Virden, Ill.	117	3800	5750
Bishop, Roy C., Pontiac, Ill.	....	....	....
Blume, W. B., 6505 Norwood Park Ave., Norwood Park Station, Chicago	....	....	....
Boothly, C. M., Griggsville, Ill.	....	....	....
Bowen, J. W., Jacksonville, Ill.	....	....	....
Bramel, H. L., Mt. Auburn, Ill.	....	....	....
Brelsfoard, W. H., Kenney, Ill.	32	3800	....
Brennan, Matt, Lincoln, Ill.	....	....	....
Bruner, E. H., 3836 N. 44th Ave., Chicago	....	....	....
Bryant, E. J., 676 Walnut Ave., Elgin, Ill.	11	....	184

	No. of Colonies, 1916	Pounds Comb Honey	Pounds Extracted Honey
Buchmayer, J. F., Iowa City, Iowa	45	....	2500
Bull, John C., Hammond, Ind.	....	....	....
Bunch, J. P., Naples, Ill.	11	1400	300
Burnett, R. A., 199 S. Water St., Chicago	....	....	....
Burrows, Chas., 810 N. McLain St., Lincoln, Ill.	3	80	90
Campbell, Jas. R., R. 3, Marissa, Ill.	6	120	140
Campbell, Jas. S., Florence, Ill.	....	....	....
Carder, Otis, Lakewood, Ill.	13	750	....
Carlson, P. A., 503 S. E. 4th St., Galva, Ill.	14	1500	1100
Carr, Geo. W., Box 593, Glen Ellyn, Ill.	....	....	....
Chapman, J. R., Raymond, Ill.	....	....	....
Chatman, M., Valley City, Ill.	....	....	....
Clark, Frank, Ridott, Ill.	....	....	....
Claussen, S. S., R. 3, Oregon, Ill.	....	....	....
Claypool, George, Marshall, Ill.	30	2000	60
Cline, John, Mendota, Ill.	....	....	....
Coleman, W. F., 1426 W. Madison St., Chicago	....	....	....
Conrad, C. M., Flanagan, Ill.	....	....	....
Coogan, Wm. M., Lincoln, Ill.	4	60	240
Cooper, Paul, Hammond, Ill.	....	....	....
Coppin, Aaron, Wenona, Ill.	....	....	....
Crane, Bert, LaSalle, Ill.	....	....	....
Cronk, W. R., Springfield, Ill.	....	....	....
Crum, Fred, Palmyra, Ill.	....	....	....
Cunningham, J. C., Streator, Ill.	68	3500	....
Dadant, C. P., Hamilton, Ill.	....	....	....
Dadant, L. C., Hamilton, Ill.	....	....	....
Damon, C. J., Box 157, Oswego, Ill.	24	....	....
Davis, Chas. W., Curran, Ill.	....	....	....
Deane, Mrs. Nellie, Lincoln, Ill.	....	....	....
Deem, B. L., Colona, Ill.	3	....	100
DeJarnett, F. J., Lincoln, Ill.	....	....	....
DeSort, A. F., 497 Chas. St., Aurora, Ill.	....	....	....
Desort, Frank, 1308 Ottawa St., Lincoln, Ill.	17	70	600
Donyes, Geo. F., Durand, Ill.	100	300	1500
Doty Bros., Charleston, Ill.	28	400	....
Easterday, E. S., Nokomis, Ill.	1	44	....
Ebens, John, R. 3, Oregon, Ill.	....	....	....
Eisenbise, Ira B., Nokomis, Ill.	....	....	....
Etienne, Alphonse, R. 28, Ottawa, Ill.	1	....	60
Farmer, Trueman, Rohrer, Ill.	1	120	....
Farrington, F. C., Wheaton, Ill.	....	....	....
Fawcett, J. F., 419 E. Peru St., Princeton, Ill.	....	....	....
Ferguson, L. R., Harvey, Ill.	....	....	....
Finch, C. W., 1451 Ogden Ave., Chicago	....	....	....
Finger, C. A., Marissa, Ill.	28	600	400
Fisher, Henry F., Bensenville, Ill.	26	175	1800
Flood, Arthur, 3346 S. 52d Ave., Cicero, Ill.	....	....	....
Fosse, E. P., Marion, Ill.	72	1500	2700

	No. of Colonies, 1916	Pounds Comb Honey	Pounds Extracted Honey
Foss, John F., Walnut, Ill.	80	3500	....
Galushka, Joseph, 926 Pekin St., Lincoln, Ill.	....	....	....
Gernert, Dr. G. B., U. of I., Urbana, Ill.	....	....	....
Gill, A. G., 215 W. Ohio St., Chicago	....	....	....
Gillespie, H. S., LaPrairie, Ill.	....	....	....
Gray, W. H., Chillicothe, Ill.	120	2000	3000
Greer, J. R., Shumway, Ill.	20	....	....
Greer, M. W., Rushville, Ill.	....	....	....
Grievers, Blake B., Lacon, Ill.	....	....	....
Haan, Frank J., Riverview, Ill.	....	....	....
Habermann, Mrs. Wm., Lodi, Wis.	....	....	....
Hagler, Walter, Virden, Ill.	2	100	....
Harris, J. D., Alhambra, Ill.	15	1200	....
Harris, W. W., Lincoln, Ill.	....	....	....
Hartman, G., Freeport, Ill.	....	....	....
Hassinger, Edw., Jr., Greenville, Wis.	112	72	9000
Heinzel, A. O., R. 3, Lincoln, Ill.	....	....	....
Heinzel, Herman, Lincoln, Ill.	3	....	....
Hertel, Chas., 627 Stromberg Ave., Belleville, Ill.	....	....	....
Heslop, Edward, R. 8, Springfield, Ill.	....	....	....
Hettel Mrs. J., Marine, Ill.	....	....	....
Hoes, J. Scott, Butler, Ill.	11	840	40
Hollowell, J. J., Farmer City, Ill.	42	4000	....
Horack, Charles, Streator, Ill.	6	....	2000
Howser, Claude, Atlantic, Ill.	....	....	....
James, Moses, Mahomet, Ill.	8	....	....
Kannenberg, C. F., 1114 Augusta St., Oak Park, Ill.	....	....	....
Kieffer, Ed., 4940 Monticello Ave., Chicago	....	....	....
Kildow, A. L., Putnam, Ill.	....	....	....
Kile, Henry, Rockford, Ill.	....	....	....
King, Harry L., R. 10, Springfield, Ill.	....	....	....
King, Wilson, R. 1, Antioch, Ill.	....	....	....
Kluck, N. A., R. 4, Lena, Ill.	30	10	4000
Kruse, Chas. L., Paris, Ill.	....	....	....
Legat, Sylvester, Spring Valley, Ill.	....	....	....
Levi, Jas., R. 4, Lincoln, Ill.	....	....	....
Lind, M. H., Bader, Ill.	90	1800	2200
Lyman, W. C., Downers Grove, Ill.	....	....	....
Mandel, H. W., Palmyra, Ill.	37	3000	1000
Marriott, Mrs. Maryettie, Riverdale Ad., Pekin, Ill.	9	500	....
Martin, M. M., Caledonia, Ill.	....	....	....
Maurer, John F., R. 5, Lincoln, Ill.	....	....	....
McCartney, George, Rockford, Ill.	....	....	....
Miller, E. S., 518 College Ave., Valparaiso, Ind.	....	....	....
Moore, Will J., 105 N. Main St., Jacksonville, Ill.	2	100	....
Muchleip, H., Apple River, Ill.	....	....	....
Mundell, J. M., Gary, Ind.	....	....	....
Ness, L. L., Morris, Ill.	175	10000	....
Newburn, J. W., Wenona, Ill.	....	....	....

	No. of Colonies, 1916	Pounds Comb Honey	Pounds Extracted Honey
Norberg, Arthur J., Spring Valley, Ill.	....	....	....
North, W. L., R. 1, Winchester, Ill.	....	....	....
Null, Chas. E., Urbana, Ill.	....	....	....
Oakes, B. F., Maywood, Ill.	....	....	....
O'Brien, John, R. 2, Newark, Ill.	89	3300	220
Olson, John, Davis, Ill.	78	100	8000
O'Neil, Robert, Lane, Ill.	4	....	....
Perisho, Sylvan, Martinsville, Ill.	....	....	....
Piercfield, Wm., Byron, Ill.	30	500	2000
Poindexter, Jas., R. 5, Bloomington, Ill.	....	....	....
Prather, S. E., Springfield, Ill.	....	....	....
Price, Henry, Elizabeth, Ill.	50	....	....
Pyles, I. E., Putnam, Ill.	....	....	....
Rasmussen, Peter, Fairdale, Ill.	....	....	....
Ressinger, Frank, Mason City, Ill.	....	....	....
Reynolds, Alva, Altona, Ill.	....	....	....
Richardson, Dr. G. R., Princeton, Ill.	....	....	....
Riley, J. R., Breeds, Ill.	....	....	....
Robbins, Daniel E., Payson, Ill.	30	250	5000
Rochrs, H., Hinsdale, Ill.	....	....	....
Root, E. R., Medina, Ohio	....	....	....
Ross, R. B., Jr., 317 Metcalf Ave., Westmount, Quebec, Can.	....	....	....
Russo, Gotlieb, 3029 N. Leavitt St., Chicago	....	....	....
Sauer, Geo. L., Polo, Ill.	58	200	5400
Schmertman, Lewis, Freeport, Ill.	28	160	4425
Schneider, Chas., Delavan St., Lincoln, Ill.	....	....	....
Schoonover, H. V., Bishop, Ill.	....	....	....
Scripter, Dr. Otis, Zion City, Ill.	....	....	....
Seastream, George, Box 142, Pawnee, Ill.	....	....	....
Seibold, Jacob, Homer, Ill.	24	1200	....
Shawver, Oscar, Casey, Ill.	28	1200	....
Shearer, Hallock, R. 1, Mt. Carmel, Ill.	28	700	800
Sieb, Albert, 209 E. Clinton St., Lincoln, Ill.	10	250	1100
Sievert, F. W., Box 101, Porter, Ind.	....	....	....
Simmons, J. R., 15544 Turtington Ave., Harvey, Ill.	....	....	....
Simpson, Harry, 1011 McLean St., Lincoln, Ill.	....	....	....
Smith, Henry L., 2008 S. 4th St., Springfield, Ill.	....	....	....
Snell, F. A., Milledgeville, Ill.	50	....	4000
Sopher, Frank, 8043 Muskegon Ave., Chicago	....	....	....
Spencer, A. J., Livingston, Ill.	4	594	....
Spencer, Thos., Livingston, Ill.	....	....	....
Spille, A. D., Oakford, Ill.	9	600	....
Steinhauser, Jno. S., R. D., Box 37, Downers Grove, Ill.	28	200	1000
Stone, Jas. A., R. 4, Springfield, Ill.	....	....	....
Stumm, W. H., R. 3, Edinburg, Ill.	39	2500	1500
Sudendorf, W. E., Clinton, Ill.	....	....	....
Swigart, John, Maquon, Ill.	....	....	....
Sylvester, L., 123 S. Highland Ave., Aurora, Ill.	17	1200	450
Taylor, J. H., Virginia, Ill.	....	....	....

	No. of Colonies, 1916	Pounds Comb Honey	Pounds Extracted Honey
Troeger, Louis, W. Kickapoo, Ill.	....	....	....
Troutner, Fred, Pittsfield, Ill.	21	2500	750
Troxell, G. W., R. 2, Lovington, Ill.	8	600	....
Turner, W. P., Peoria Heights, Ill.	....	....	....
Tyler, S. A., Hartsburg, Ill.	16	700	....
Ullmann, Margaret, Highland Park, Ill.	6	500	....
Ulman, P. J., 1134 Lexington St., Elkhart, Ind.	....	....	....
Van Butsele, Louis, Collinsville, Ill.	....	....	....
Van De Wiel, Anton, East Dubuque, Ill.	....	....	....
VanWingarden Bros., Hebron, Ind.	....	....	....
Vaupel, John, R. 4, Pekin, Ill.	....	....	....
Vogel, Henry, Galena, Ill.	80	3000	1000
Wachter, Martin, Hinsdale, Ill.	39	....	....
Walstrom, J. A., 800 W. Putnam St., Princeton, Ill.	....	....	....
Wankle, Peter, Beardstown, Ill.	....	....	....
Warber, Rev. C., Alhambra, Ill.	4	450	....
Weaver, A. T., Nokomis, Ill.	5	150	....
Werner, Louis, Edwardsville, Ill.	12	500	150
Wheeler, Harry J., R. 10, Springfield, Ill.	3	550	....
Wheeler, J. C., 622 S. Austin Blvd., Oak Park, Ill.	....	....	....
Whitmore, H., Momence, Ill.	14	500	200
Wicklein, F. A., Percy, Ill.	17	....	1300
Wiley, C. H., 205 E. Locust St., Harrisburg, Ill.	21	300	1500
Williams, John, R. 3, Marissa, Ill.	2	....	120
Williams, W. H., Pekin, Ill.	24	2000	....
Withrow, G. M., Mechanicsburg, Ill.	....	....	....
Wolf, Sustin D., Parkville, Mo.	7	600	....
Woolsey, Thomas C., R. 8, Springfield, Ill.	1	80	....
Wuetig, C. J., Blue Island, Ill.	7	100	....
Youle, Charles, Scales Mound, Ill.	17	500	1680
Zimmermann, Henry W., Bethalto, Ill.	29	1800	....

The Committee appointed at the last meeting of the Illinois State Association —on Medals—will probably decide to give a gold medal for first on comb honey, and a silver medal for second on same; and the same will be repeated on extracted honey. To be offered at annual meeting.

When plans are matured they will be announced in the Bee Journals.

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